

02-8704-03-SR
REV. NO. 0

FINAL DRAFT
SITE INSPECTION REPORT
COMMERCIAL ENVELOPE MFG. CO. INC.
DEER PARK, NEW YORK

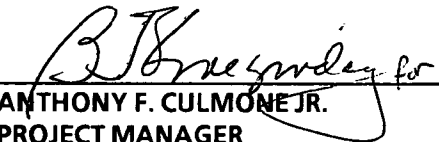
PREPARED UNDER
TECHNICAL DIRECTIVE DOCUMENT NO. 02-8704-03
CONTRACT NO. 68-01-7346

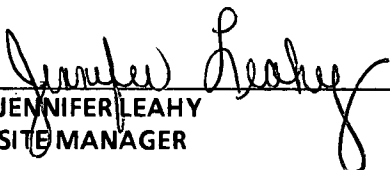
FOR THE
ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

SEPTEMBER 21, 1990

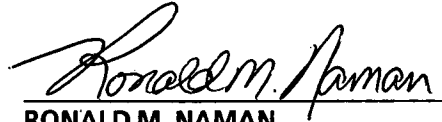
NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY:


ANTHONY F. CULMONE JR.
PROJECT MANAGER


JENNIFER LEAHY
SITE MANAGER

REVIEWED/APPROVED BY:


RONALD M. NAMAN
FIT OFFICE MANAGER

203017



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SECTION 1

SITE SUMMARY

1.0 SITE SUMMARY

Commercial Envelope Manufacturing Co., Inc. (CEM) is located in an active industrial/commercial area of Deer Park, Suffolk County, New York in central Long Island. The facility has been in operation since 1976. There are two buildings on a flat 7-acre site. The regional slope of the terrain is to the south. At present CEM occupies only the main building and leases the warehouse building to Pepsi-Cola Co.

Over several years CEM generated and disposed of hazardous waste on site, including solvents, inks, and glues. Numerous inspections by the Suffolk County Department of Health Services (SCDHS) identified four areas of concern, containing elevated levels of solvents and heavy metals: three leaching pools, three underground storage tanks, the area adjacent to the trash compactor, and a 5,800-gallon ink waste spill that occurred in 1981. Several court orders have led to the eventual cleanup of these contaminated areas, under the guidance of the SCDHS. As part of a consent order, CEM was permitted to incinerate lead oxide, silver salts, copper salts, iron salts, particulates, and hydrogen chloride.

Despite this major cleanup effort, groundwater contamination was still a concern. The SCDHS required CEM to install and sample monitoring wells in the upper glacial aquifer. Analytical sampling results taken by SCDHS demonstrated volatile organic contamination. These results prompted the involvement of the U.S. EPA.

NUS Corp. Region 2 FIT performed a site inspection at the CEM site on July 13, 1987. During the site inspection, two soil and three groundwater samples were collected and analyzed for Target Compound List (TCL) parameters. Analyses of soil samples, collected outside of the solvent storage shed, and groundwater samples indicate the presence of inorganic contaminants. Volatiles were detected in groundwater and soil samples. Tetrachloroethene was the only volatile detected in the soil samples. Volatiles were detected in the downgradient groundwater samples at higher concentrations than in the upgradient well samples.

Ref. Nos. 3, 4, 6, 14, 16

SECTION 2

ENVIRONMENTAL PROTECTION AGENCY FORM 2070-13

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D981184138

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) 02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Commercial Envelope Mfg. Co., Inc. 900 Grand Boulevard
03 CITY 04 STATE 05 ZIP CODE 06 COUNTY 07 COUNTY CODE 08 CONG DIST.
Deer Park NY 11729 Suffolk 103 2
09 COORDINATES 10 TYPE OF OWNERSHIP (Check one)
LATITUDE LONGITUDE
4 00 4 5' 3 8" N 0 7 30 1 7' 5 3" W
X A. PRIVATE B. FEDERAL C. STATE
D. COUNTY E. MUNICIPAL F. OTHER
G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION 02 SITE STATUS 03 YEARS OF OPERATION
7 / 13 / 87 X ACTIVE 1976 / Present UNKNOWN
MONTH DAY YEAR INACTIVE BEGINNING YEAR ENDING YEAR
AGENCY PERFORMING INSPECTION (Check all that apply)
A. EPA X B. EPA CONTRACTOR NUS Corp. Region 2 FIT C. MUNICIPAL D. MUNICIPAL CONTRACTOR
(Name of firm) (Name of firm)
E. STATE F. STATE CONTRACTOR G. OTHER
(Name of firm) (Specify)

05 CHIEF INSPECTOR 06 TITLE 07 ORGANIZATION 08 TELEPHONE NO.
Edward L. Leonard Environmental Scientist NUS Corp. FIT 2 (201) 225-6160
09 OTHER INSPECTORS 10 TITLE 11 ORGANIZATION 12 TELEPHONE NO.
Stephen Maybury Environmental Scientist NUS Corp. FIT 2 (201) 225-6160
Pauline Doherty Toxicologist NUS Corp. FIT 2 (201) 225-6160
Gerald Gilliland Technician NUS Corp. FIT 2 (201) 225-6160
Joseph Murtaugh Technician NUS Corp. FIT 2 (201) 225-6160
Dan de Bruijn Technician NUS Corp. FIT 2 (201) 225-6160

13 SITE REPRESENTATIVES INTERVIEWED 14 TITLE 15 ADDRESS 16 TELEPHONE NO.
Steven Cohen Lawyer Gold and Wachtel (212) 223-3311
10 East 53rd Street
New York, NY 10022
William Wachtel Lawyer Gold and Wachtel (212) 223-3311
10 East 53rd Street
New York, NY 10022
Nicholas Andrianas Engineer Eder Associates (516) 671-8440
85 Forest Avenue
Locust Valley, NY 11560
Leroy Brannagan Plant Manager Commercial Envelope Mfg. Co. (516) 242-2500
900 Grand Boulevard
Deer Park, NY 11729

17 ACCESS GAINED BY (Check one) 18 TIME OF INSPECTION 19 WEATHER CONDITIONS
X PERMISSION 0930 hrs. Hot, hazy, and humid. Air temperature 75 - 90°F. Steady
WARRANT winds southeast 5-10 mph.

IV. INFORMATION AVAILABLE FROM

01 CONTACT 02 OF (Agency/Organization) 03 TELEPHONE NO.
Amy Brochu U.S. EPA (201) 906-6802

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM 05 AGENCY 06 ORGANIZATION 07 TELEPHONE NO. 08 DATE
Jennifer O. Leahy Region 2 FIT NUS Corp. (201) 225-6160 9 / 17 / 90

EPA FORM 2070-13 (7-81)

MONTH DAY YEAR
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II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply) 02 WASTE QUANTITY AT SITE 03 WASTE CHARACTERISTICS (Check all that apply)

<input type="checkbox"/> A. SOLID	<input type="checkbox"/> E. SLURRY	(Measures of waste quantities must be independent)	<input checked="" type="checkbox"/> A. TOXIC	<input checked="" type="checkbox"/> E. SOLUBLE	<input checked="" type="checkbox"/> I. HIGHLY VOLATILE
<input type="checkbox"/> B. POWDER, FINES	<input checked="" type="checkbox"/> F. LIQUID		<input type="checkbox"/> B. CORROSIVE	<input type="checkbox"/> F. INFECTIOUS	<input type="checkbox"/> J. EXPLOSIVE
<input checked="" type="checkbox"/> C. SLUDGE	<input type="checkbox"/> G. GAS		<input type="checkbox"/> C. RADIOACTIVE	<input checked="" type="checkbox"/> G. FLAMMABLE	<input type="checkbox"/> K. REACTIVE
<input type="checkbox"/> D. OTHER			<input checked="" type="checkbox"/> D. PERSISTENT	<input type="checkbox"/> H. IGNITABLE	<input type="checkbox"/> L. INCOMPATIBLE

(Specify) _____ TONS _____
CUBIC YARDS _____
NO. OF DRUMS 131

☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	131	55-gallon drums	Three underground storage tanks and three leaching pools were illegally used to store and dispose of hazardous waste. In addition, approximately 5,835 gallons of hazardous waste were spilled on the ground in 1981.
OLW	OILY WASTE			
SOL	SOLVENTS	Unknown	Unknown	
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	Unknown	Unknown	
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	Unknown	Unknown	

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
Analytical results from Geraghty & Miller, February 24, 1986 and March 16, 1987.					
SOL	1,2-Dichloroethene	156-60-5	Unknown	610	ug/L
SOL	Tetrachloroethene	127-18-4	Leaching Pools	5	ug/L
SOL	Toluene	108-88-3	Leaching Pools	5	ug/L
SOL	1,1,1-Trichloroethane	71-55-6	Leaching Pools	2	ug/L
SOL	Vinyl Chloride	75-01-4	Unknown	2	ug/L
SOL	Xylenes (Total)	1330-20-7	Leaching Pools	120	ug/L
Analytical results from SCHS inspection on January 30, 1981, August 29, 1984, October 24, 1984 and February 27, 1986.					
SOL	Methylene Chloride	75-09-2	Leaching Pools	180	ug/L
MES	Chromium (Total)	7440-47-3	Spill	43	mg/L
MES	Copper	7440-50-8	Underground Tanks	865	mg/L
MES	Lead	7439-92-1	Spill	210	mg/L
MES	Silver	7440-22-4	Spill	2.1	mg/L
MES	Zinc	7440-66-6	Spill	11	mg/L
Analytical results from NUS Region 2 FIT site inspection July 13, 1987.					
SOL	Vinyl Chloride	75-01-04	Unknown	7.9J	ug/L
SOL	1,1,1-Trichloroethane	71-55-6	Leaching Pools	2.8J	ug/L
SOL	Tetrachloroethene	127-18-4	Leaching Pools	6.3	ug/kg
PSD	Endosulfan sulfate	1031-07-8	Unknown	110J	ug/kg
MES	Aluminum	7429-90-5	Leaching Pools	65,000	ug/L
MES	Arsenic	7440-38-2	Leaching Pools	74.9	ug/L
MES	Beryllium	7440-41-7	Leaching Pools	6.4	ug/L
MES	Cadmium	7440-43-9	Leaching Pools	20.1	ug/L

J - Compound present below contract-specified detection limits, but above instrument detection limits (IDL).

Cont'd on Attachment 1

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	Unknown		FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (See specific references. e.g., state files, sample analysis, reports)

NYSDDEC, Engineerings Investigations at Inactive Hazardous Waste Sites, Phase I Investigations, Commercial Envelope Mfg. Co., Inc., Site No. 152103, EA Science and Technology, Draft, May 1986.
Suffolk County Department of Health Services (SCHDS) Inspectors Notes, January 15, 1981.
U.S. EPA Contract Laboratory Program, Nanco Labs, Inc., organic analyses, and Chemtech Consulting Group, inorganic analyses, Case No. 7610, Laboratory analysis from NUS Corp. Region 2 FIT Site Inspection conducted on July 13, 1987.
Letter from S. Cohen, of Gold and Wachtel, to J. Wagner, NUS Corp., June 10, 1987.
Suffolk County Health Services Laboratory Chemical Examination of Water, Sewage, Industrial Waste, January 15, 1981 and March 11, 1986.

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers) (Cont'd)

CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
Analytical results from NUS Region 2 FIT site inspection July 13, 1987.					
MES	Chromium	7440-47-3	Leaching Pools	142E	ug/L
MES	Cobalt	7440-48-4	Leaching Pools	98.2	ug/L
MES	Iron	1309-37-1	Leaching Pools	160,000	ug/L
MES	Lead	7439-92-1	Leaching Pools	548	ug/L
MES	Manganese	7439-96-5	Leaching Pools	5,710	ug/L
MES	Silver	7440-22-4	Leaching Pools	43.4	ug/L

E - Value estimated due to laboratory interference.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D981184138

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 X A. GROUNDWATER CONTAMINATION 02 X OBSERVED (DATE: 7/13/87) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 111,300 04 NARRATIVE DESCRIPTION

Contaminants attributable to the site have been detected in downgradient groundwater samples. Hazardous wastes were discharged into on-site leaching pools and underground storage tanks. In addition, spills of ink waste and a spill adjacent to the trash compactor were noted. Groundwater and soil sample analyses indicate volatile organic compounds (VOCs) and heavy metals. Groundwater is the sole source for potable purposes within 3 miles.

01 X B. SURFACE WATER CONTAMINATION 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 04 NARRATIVE DESCRIPTION

There is a potential for surface water contamination. There is no direct drainage pathway from the site to the nearest body of water; however, the facility slopes toward Sampwams Creek, which is located approximately 2,200 feet south of the site. There are no surface water intakes for potable or irrigation purposes within 3 miles downstream of the site.

01 C. CONTAMINATION OF AIR 02 OBSERVED (DATE:) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 04 NARRATIVE DESCRIPTION

There is little likelihood of a release to the air. Hazardous substances were detected primarily in the groundwater. Air monitoring readings were detected above background in the vicinity of the solvent storage shed. There were no other readings detected above background in the ambient air at the facility during the NUS Region 2 FIT site inspection.

01 D. FIRE/EXPLOSIVE CONDITIONS 02 OBSERVED (DATE:) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 04 NARRATIVE DESCRIPTION

There were no observations during field investigation that indicated a potential for fire/explosive conditions on site.

01 X E. DIRECT CONTACT 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 04 NARRATIVE DESCRIPTION

There is a potential for direct contact with the contaminants to occur. Although a majority of the facility is paved, the north side of the facility and the solvent storage area are not fenced, allowing unauthorized access.

01 X F. CONTAMINATION OF SOIL 02 X OBSERVED (DATE: 7/13/87) _ POTENTIAL _ ALLEGED
03 AREA POTENTIALLY AFFECTED: Unknown 04 NARRATIVE DESCRIPTION
(ACRES)

Analyses of soil samples collected on July 13, 1987 NUS Corp. Region 2 FIT indicate the presence of volatile organic, pesticide, and heavy metal contaminants.

01 X G. DRINKING WATER CONTAMINATION 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 111,300 04 NARRATIVE DESCRIPTION

The potential exists for drinking water contamination. Contaminants detected in the groundwater were attributable to site activities. Suffolk County drinking water is entirely supplied by groundwater. The nearest public supply well is located approximately 0.75 mile northeast of the site.

01 X H. WORKER EXPOSURE/INJURY 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: Unknown 04 NARRATIVE DESCRIPTION

There is a potential for worker exposure. Contaminants were detected in soil samples near the solvent storage shed. The facility is not totally fenced, allowing unauthorized access.

01 X I. POPULATION EXPOSURE/INJURY 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 111,300 04 NARRATIVE DESCRIPTION

The potential exists for population exposure since groundwater is contaminated. Groundwater is the only source of potable water within 3 miles. There is a potential of exposure through direct contact. Contaminants were detected in surface soil samples. The facility is not entirely fenced, allowing unauthorized access.

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 J. DAMAGE TO FLORA 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

It is unlikely that there would be any damage to flora. The contamination is predominantly in the groundwater. The site is also predominantly covered by pavement and buildings and is in a suburban commercial/industrial area.

01 K. DAMAGE TO FAUNA 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

It is unlikely that there would be any damage to fauna. The contamination is predominantly in the groundwater. The site is also predominantly covered by pavement and buildings and is in a suburban commercial/industrial area.

01 L. CONTAMINATION OF FOOD CHAIN 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

It is unlikely that there would be contamination to the food chain. The contamination is predominantly in the groundwater. The site is also predominantly covered by pavement and buildings and is in a suburban commercial/industrial area.

01 X M. UNSTABLE CONTAINMENT OF WASTES 02 X OBSERVED (DATE: 7/9/85) _ POTENTIAL _ ALLEGED
(Spills/runoff/standing liquids/leaking drums)
03 POPULATION POTENTIALLY AFFECTED: 8,992 04 NARRATIVE DESCRIPTION

There were three areas of concern with unstable waste containment. There were three leaching pools receiving waste discharge, three underground storage tanks, and an 5,800-gallon spill in 1981. All waste containment areas lacked a diversion or containment system.

01 X N. DAMAGE TO OFFSITE PROPERTY 02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

The potential exists for off-site property damage. The regional slope of the terrain is to the south toward a creek. Sample analysis also indicates groundwater contamination which could migrate downgradient from the facility.

01 X O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs 02 X OBSERVED (DATE: 8/29/84) _ POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

Storm runoff from the facility is believed to enter an on-site leaching pool. Analyses of the contents in the storm drain in the loading dock area by the SCDHS demonstrated the presence of several solvents, including methylene chloride, tetrachloroethylene, and toluene. During the NUS Corp. Region 2 FIT investigation on July 13, 1987, there were no containment or diversion features noted around the storage area.

01 X P. ILLEGAL/UNAUTHORIZED DUMPING 02 X OBSERVED (DATE: 7/9/85) _ POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

Analyses of the the middle leaching pool by the SCDHS demonstrated the presence of several solvents, including methylene chloride, toluene, and xylene. This discharge was not SPDES-permitted.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

The solvent storage shed located on the west side of the building contained approximately 20 55-gallon drums of unknown substances inside the unfenced storage area. There was a stain noted south of the storage area.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 111,300

IV. COMMENTS

None

V. SOURCES OF INFORMATION (Cite specific references. e.g., state files, sample analysis, reports)

Telecon Note: Conversation between Mrs. Bahr, Suffolk County Water Authority, and J. Leahy, NUS Corp., August 15, 1990.
NSYDEC Engineering Investigation of Inactive Hazardous Waste Sites, Phase I Investigation, Commercial Envelope Mfg. Co. Inc., Site No. 152103, EA Science and Technology, Draft, May 1986.
Field Notebook No. 0101, Commercial Envelope Manufacturing Co., Inc., TOD No. 02-8704-03, Site Inspection, NUS Corp. Region 2 FIT, Edison, NJ, July 13, 1987.
Letter from S. Cohen, of Gold and Wachtel, to J. Wagner, NUS Corporation, June 10, 1987.
Suffolk County Department of Health Services (SCHDS) Inspectors Notes, January 15, 1981 and January 25, 1983.
U.S. EPA Contract Laboratory Program Nanco Labs, Inc., organic analyses, and Chemtech Consulting Group, inorganic analyses, Case No. 7610, Laboratory Analysis from NUS Corp. Region 2 FIT Site Inspection conducted on July 13, 1987.
General Sciences Corp., Graphical Exposure Modeling System (GEMS). Landover, Maryland, 1986.
Three Mile Vicinity Map for Commercial Envelope Mfg. Co., Inc. Site based on U.S. Geological Service Topographic Maps, 7.5 minute series, Quadrangles of "Greenlawn, NY," "Bayshore West, NY," and "Central Islip, NY," 1967.
Telecon Note: Conversation between D. Obreg, Suffolk County Health Department, and E. Leonard, NUS Corp., on July 15, 1987.
Letter from W.J. Brandow, Brentwood Water District, to E. Leonard, NUS Corporation, August 25, 1987.
Letter from W.J. Schnickler, Chief Engineer Suffolk County Water Authority, to E. Leonard, NUS Corporation, August 3, 1987.
Letter from S.C. McLenion, P.E., H2M Group, to E. Leonard, NUS Corporation, August 25, 1987.
Telecon Note: Conversation between James Desale, Town of Babylon Highway Dept., and E. Leonard, NUS Corp., June 24, 1987.
Telecon Note: Conversation between Colby Tucker, NYSDEC, and J. Leahy, NUS Corp., August 13, 1990.
Water Quality Regulations Surface Water and Groundwater Classifications and Standards, New York State, Title 6, Codes, Rules and Regulations, Chapter X, Parts 700-705, October 31, 1985.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D981184138

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
<input type="checkbox"/> A. NPDES				
<input type="checkbox"/> B. UIC				
<input type="checkbox"/> C. AIR				
<input type="checkbox"/> D. RCRA				
<input type="checkbox"/> E. RCRA INTERIM STATUS				
<input type="checkbox"/> F. SPCC PLAN				
<input checked="" type="checkbox"/> G. STATE (Specify) SPDES	0177113	Unknown	12/7/84	Permit was issued only for cooling water discharge to groundwater. Permit was not renewed.
<input type="checkbox"/> H. LOCAL (Specify)				
<input checked="" type="checkbox"/> I. OTHER (Specify)	NYD002030690	7/8/80	Unknown	Generator of hazardous wastes.
<input type="checkbox"/> J. NONE				

III. SITE DESCRIPTION

01 Storage/Disposal (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT (Check all that apply)	05 OTHER
<input type="checkbox"/> A. SURFACE IMPOUNDMENT			<input checked="" type="checkbox"/> A. INCINERATION	<input checked="" type="checkbox"/> A. BUILDINGS ON SITE
<input type="checkbox"/> B. PILES			<input type="checkbox"/> B. UNDERGROUND INJECTION	
<input checked="" type="checkbox"/> C. DRUMS, ABOVE GROUND	Unknown	Unknown	<input type="checkbox"/> C. CHEMICAL/PHYSICAL	2
<input checked="" type="checkbox"/> D. TANK, ABOVE GROUND	8,000	Gallons	<input type="checkbox"/> D. BIOLOGICAL	06 AREA OF SITE
<input checked="" type="checkbox"/> E. TANK, BELOW GROUND	8,500	Gallons	<input type="checkbox"/> E. WASTE OIL PROCESSING	
<input type="checkbox"/> F. LANDFILL			<input type="checkbox"/> F. SOLVENT RECOVERY	
<input type="checkbox"/> G. LANDFARM			<input type="checkbox"/> G. OTHER RECYCLING/RECOVERY	7.0
<input type="checkbox"/> H. OPEN DUMP			<input type="checkbox"/> H. OTHER (Specify)	(Acres)
<input checked="" type="checkbox"/> I. OTHER Leaching Pools (Specify)	6,200	Gallons		

07 COMMENTS

In addition to the above, approximately 5,835 gallons of ink waste were spilled on the adjacent property in 1981. This formed a pool approximately 40 feet by 78 feet by 0.25 feet deep. CEM also applied as part of a consent order to receive a permit to operate an incinerator. It is unknown if the permit was granted. Prior to January 1986, an oil distributor mistakenly pumped 9,300 gallons of fuel oil down an observation well. Shortly after, the oil was removed with the soil, and the area was backfilled with sand.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☒ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Prior to cleanup and permitting by the SCDHS, the following conditions were known to exist:

- 1) Aboveground drums and tanks in sound condition with no liner or leachate collection system;
- 2) Belowground tank of unknown condition with no liner or leachate collection system; and
- 3) Unauthorized leaching pools.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

The major areas of concern are the former leaching pools, the former underground storage tanks, the area around the trash compactor, and the ink waste spill. All of these areas have been remediated to SCDHS specifications, filled in, and paved over. These areas are not easily accessible to the public or employees. During the NUS Region 2 FIT site inspection, stained soil was observed around the solvent storage shed. The area is not fenced or secured to prevent unauthorized access.

VI SOURCES OF INFORMATION (Cite specific references. e.g., state files, sample analysis, reports)

Telecon Note: Conversation between D. O'brig, Suffolk County Health Department, and E. Leonard, NUS Corp., July 15, 1987.
Telecon Note: Conversation between G. Watt, SCDH Water Resources and E. Leonard, NUS Corp., July 16, 1987.
NYSDEC, Engineering Investigations at Inactive Hazardous Waste Sites, Phase I Investigations, Commercial Envelope Mfg. Co., Inc., Site No. 152103, EA Science and Technology, Draft, May 1986.
Field Notebook No. 0101, Commercial Envelope Manufacturing, Co. Inc., TOD No. 02-8704-03, Site Inspection, Corp. Region 2 FIT, Edison, NJ, July 13, 1987.
Suffolk County Department of Health Services Inspectors Notes, January 15, 1981, January 14, 1985, January 25, 1985, February 3, 1986, and August 3, 1984.

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY
(Check as applicable)

02 STATUS

03 DISTANCE TO SITE

COMMUNITY	SURFACE	WELL	ENDANGERED	AFFECTED	MONITORED	
NON-COMMUNITY	A. —	B. X	A. —	B. —	C. X	A. 0.75 (mi)
	C. —	D. X	D. —	E. —	F. —	B. Unknown (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☒ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION ☐ D. NOT USED, UNUSEABLE

(Other sources available)
COMMERCIAL,
INDUSTRIAL,
IRRIGATION
(No other water sources available)

02 POPULATION SERVED BY GROUND WATER: 111,300 03 DISTANCE TO NEAREST DRINKING WATER WELL: 0.75 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
16.0 (ft)	South	1.0 (ft)	Unknown (gpd)	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

There are two aquifers of concern underlying the site, the upper glacial aquifer and Magothy aquifer. These aquifers are hydraulically connected. The surficial Upper Glacial aquifer consists of glacial deposits of stratified sand and gravel in melt-water spillways and outwash plains. The aquifer in this area varies from approximately 100 to 400 feet thick. The Magothy aquifer consists of beds and lenses of fine and coarse sand, containing traces to large amounts of clay and silt intercolated with thin to thick beds and lenses of clay, silt and clayey silty sand. The aquifer's depth in this area varies from approximately 900 to 7,600 feet. Bedrock is composed of crystalline metamorphic and igneous rocks such as schist, gneiss, and granite. The soft clayey zone within bedrock is more than 100 feet thick. The actual depth of bedrock is from the surface to 2,700 feet.

TO RECHARGE AREA

II. DISCHARGE AREA

<input checked="" type="checkbox"/> YES	COMMENTS	<input checked="" type="checkbox"/> YES	COMMENTS
<input type="checkbox"/> NO	Aquifers are recharged directly by rainwater infiltration.	<input type="checkbox"/> NO	

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Sampawams Creek	Unknown	Approximately 0.4 (mi)
		(mi)
		(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

02 DISTANCE TO NEAREST POPULATION

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE	
A. 9,000 NO. OF PERSONS	B. 47,400 NO. OF PERSONS	C. 111,300 NO. OF PERSONS	0.2 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

04 DISTANCE TO NEAREST OFF-SITE BUILDING

13,300 adjacent property < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site. e.g., rural, village, densely populated urban area)

The site is located within the village of Deer Park in the northeast corner of Babylon Township. Babylon Township is a densely populated suburban area. Huntington Township is 1.5 miles to the north, and Islip Township is 0.3 mile to the east.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D981184138

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. 10^{-6} - 10^{-8} cm/sec ☒ B. 10^{-4} - 10^{-6} cm/sec ☐ C. 10^{-4} - 10^{-3} cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☒ A. IMPERMEABLE
(Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE
(10^{-4} - 10^{-6} cm/sec) ☐ C. RELATIVELY PERMEABLE
(10^{-2} - 10^{-4} cm/sec) ☐ D. VERY PERMEABLE
(Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK

2,700 (ft)

04 DEPTH OF CONTAMINATED SOIL ZONE

12 (ft)

05 SOIL pH

Unknown

06 NET PRECIPITATION

14 (in)

07 ONE YEAR 24 HOUR RAINFALL

2.75 (in)

08 SLOPE
SITE SLOPE

1 %

DIRECTION OF SITE SLOPE

South

TERRAIN AVERAGE SLOPE

1.5 %

09 FLOOD POTENTIAL

10

SITE IS IN > 500 YEAR FLOODPLAIN

SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE

A. > 2.0 (mi)

OTHER

B. > 1.0 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

> 1.0 (mi)

ENDANGERED SPECIES: Not Applicable

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL

A. 0.0 (mi)

RESIDENTIAL AREAS: NATIONAL/STATE PARKS,
FORESTS, OR WILDLIFE RESERVES

B. 0.2 (mi)

AGRICULTURAL LANDS
PRIME AG LAND

C. 0.7 (mi)

AG LAND

D. 0.5 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site property is relatively level, at an elevation of approximately 75-80 feet above mean sea level. Regional slope of the terrain is southerly. The site is located within an industrial/commercial area, directly north of a large residential community. There are agricultural lands 0.5 mile northeast of the facility.

VII SOURCES OF INFORMATION (Cite specific references e.g., state files, sample analysts, reports)

Telecon Note: Conversation between Mrs. Bahr, Suffolk County Water Authority, and J. Leahy, NUS Corp., August 15, 1990.
NYSDEC Engineering Investigations at Inactive Hazardous Waste Sites, Phase I Investigations, Commercial Envelope Mfg. Co., Inc., Site No. 152103, EA Science and Technology, Draft, May 1986.
Field Notebook No. 0101, Commercial Envelope Manufacturing, Co., Inc. TDD No. 02-8704-03, Site Inspection, NUS Corp. Region 2 FIT, Edison, NJ, July 13, 1987.
Three Mile Vicinity Map for Commercial Envelope Site based on U.S. Geological Survey (USGS) Topographic Maps, 7.5 minute series, Quadrangles of "Greenlawn, NY," "Bayshore West, NY," and "Central Islip, NY," 1976.
Suffolk County Department of Health Services (SCHDS) Inspectors Notes, January 15, 1981.
SCDHS, Analytical Results from samples collected on August 29, 1984 and July 9, 1985.
General Sciences Corp., Graphical Exposure Modeling Systems (GEMS). Landover, Maryland, 1986.
Flood Insurance Rate Map, FIRM, Town of Babylon, New York, Suffolk County, Community Panel No. 3607900025B, July 16, 1979.
Important Farmlands, Soil Conservation Service, USDA of Suffolk County, New York, 1975.
Frank, O.L. and N.E. McClymonds, Summary of the hydrologic situation on Long Island, New York as a guide to waste management alternatives, Geological Survey Professional Paper 629 - F. United States Department of Interior, 1972.
Soren, Julian. Results of subsurface exploration in the midisland are of Western Suffolk County, Long Island, New York. Long Island Water Resources, Bulletin No. 1, 1971.
Uncontrolled hazardous waste ranking system, A user's manual, 40 CFR, Part 300, Appendix A, 1986.
Letter from W.J. Schnickler, Suffolk County Water Authority, to E. Leonard, NUS Corp., August 3, 1987.
Letter from S.C. McLendon, H2M Group, to E. Leonard, NUS Corp., August 25, 1987.
Letter from W.J. Brandow, Brentwood Water District, to E. Leonard, NUS Corp., August 25, 1987.
Atlantic Coast Ecological Inventory, New York, NY-Conn-NJ, U.S. Fish and Wildlife Service, 1980.
Baxton, H.T., D.A. Sonolensky and P.K. Sheinoff, Hydrologic correlations for selected wells on Long Island, New York, USGS Water Resources Investigations Report 86-4318, U.S. Department of Interior, 1989.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D981184138

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	3	Organic Lab: Nanco Labs Inc. RD 6 Robinson Lane Wappinger Falls, NY 12590	Received 11/10/87
SURFACE WATER			
WASTE		Inorganic Lab: Chemtech Consulting Group 360 West 11th Street New York, NY 10014	Received 12/07/87
AIR			
RUNOFF			
SPILL			
SOIL	2		
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Air Monitoring	No air monitoring readings above background conditions were detected from the undisturbed areas of the site, on the OVA flame ionization detector or the HNu photoionization detector. However, elevated readings were detected on the OVA and HNu during the collection of soil sample NYSI-S2. In addition, elevated readings were also detected on the OVA in monitoring well TW2. TW2 and TW3 tested positive for vinyl chloride.
Water Level	Water level measurements were obtained from three monitoring wells.

IV. PHOTOGRAPHS AND MAPS

01 TYPE	<input checked="" type="checkbox"/> GROUND <input checked="" type="checkbox"/> AERIAL	02 IN CUSTODY OF
		NUS Corp. Region 2 FIT Files (Name of organization or individual)
03 MAPS	04 LOCATION OF MAPS	
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	NUS Corp. Region 2 FIT, Edison, NJ	

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Field Notebook No. 0101, Commercial Envelope Manufacturing Co. Inc., filed under TDD No. 02-8704-03

VI. SOURCES OF INFORMATION (Cite specific references. e.g., state files, sample analysis, reports)

U.S. EPA Contract Laboratory Program Nanco Labs, Inc., organic analyses, and Chemtech Consulting Group, inorganic analyses, Case No. 7610, Laboratory Analysis from NUS Corp. Region 2 FIT Site Inspection conducted on July 13, 1987. Field Notebook No. 0101, Commercial Envelope Manufacturing Co., Inc. TDD No. 02-8704-03, Site Inspection, Corp. Region 2 FIT, Edison, NJ, July 13, 1987.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D981184138

II. CURRENT OWNER(S)

II. CURRENT OWNER(S)			PARENT COMPANY (If applicable)		
01 NAME	02 D + B NUMBER	08 NAME	09 D + B NUMBER		
Commercial Envelope Manufacturing Co. (Kristel Family)					
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE		
900 Grand Boulevard					
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
Deer Park	NY	11729			

01 NAME	02 D + B NUMBER	08 NAME	09 D + B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D + B NUMBER	08 NAME	09 D + B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D + B NUMBER	08 NAME	09 D + B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D + B NUMBER	04 SIC CODE	07 ZIP CODE
Alwin Seal Inc.			
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	07 ZIP CODE	
900 Grand Blvd.			
05 CITY	06 STATE	07 ZIP CODE	
Deer Park	NY	11729	

01 NAME	02 D + B NUMBER	04 SIC CODE	07 ZIP CODE
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	07 ZIP CODE	
05 CITY	06 STATE	07 ZIP CODE	

01 NAME	02 D + B NUMBER	04 SIC CODE	07 ZIP CODE
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	07 ZIP CODE	
05 CITY	06 STATE	07 ZIP CODE	

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NSYDEC, Engineering Investigations at Inactive Hazardous Waste Sites, Phase I Investigation, Commercial Envelope Mfg. Co., Inc., Site No. 152103, EA Science and Technology, Draft, May 1986.
Project Note: E. Leonard, NUS Corp., to File, Subject: Past and Present Property Owners, July 29, 1987.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D981184138

III. PREVIOUS OWNER(S) (List most recent first)

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D + B NUMBER	01 NAME	02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	Fred Frank Inc. 03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE
05 CITY	06 STATE	Unknown 05 CITY	06 STATE
07 ZIP CODE		07 ZIP CODE	
01 NAME	02 D + B NUMBER	01 NAME	02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	Melville Industrial Associates 03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE
05 CITY	06 STATE	Unknown 05 CITY	06 STATE
07 ZIP CODE		07 ZIP CODE	
01 NAME	02 D + B NUMBER	01 NAME	02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	Doro Operating Corp. 03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE
05 CITY	06 STATE	Unknown 05 CITY	06 STATE
07 ZIP CODE		07 ZIP CODE	

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D981184138

II. CURRENT OPERATOR(S)			OPERATOR'S PARENT COMPANY (If applicable)		
01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER		
Commercial Envelope Mfg. Co. Inc.					
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)	13 SIC CODE		
900 Grand Boulevard					
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
Deer Park	NY	11729			
08 YEARS OF OPERATION	09 NAME OF OWNER				
11	Ira B. Kristel				

III. PREVIOUS OPERATOR(S) (List most recent first: Provide only if different from owner)			PREVIOUS OPERATOR'S PARENT COMPANIES (If applicable)		
01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER		
Alwin Seal Inc.					
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)	13 SIC CODE		
900 Grand Boulevard					
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
Deer Park	NY	11729			
08 YEARS OF OPERATION	09 NAME OF OWNER				
4	Unknown				

01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)	13 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER				

01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)	13 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER				

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC, Engineering Investigations at Inactive Hazardous Waste Sites, Phase I Investigation, Commercial Envelope Mfg. Co., Inc. Site No. 152103, EA Science and Technology, Draft, May 1986.
Project Note: E. Leonard, NUS Corp., to Commercial Envelope File, Subject: Past and Present Property Owners, July 29, 1987.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D981184138

II ON-SITE GENERATOR

01 NAME 02 D + B NUMBER

Commercial Envelope Mfg. Co., Inc.

03 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE

900 Grand Boulevard

05 CITY 06 STATE 07 ZIP CODE

Deer Park

NY

11729

III OFF-SITE GENERATOR(S)

01 NAME 02 D + B NUMBER 01 NAME 02 D + B NUMBER

None

03 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE 03 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE

05 CITY 06 STATE 07 ZIP CODE 05 CITY 06 STATE 07 ZIP CODE

01 NAME 02 D + B NUMBER 01 NAME 02 D + B NUMBER

03 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE 03 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE

05 CITY 06 STATE 07 ZIP CODE 05 CITY 06 STATE 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME 02 D + B NUMBER 01 NAME 02 D + B NUMBER

Art Weiner - Earth Moving

03 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE 03 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE

Unknown

05 CITY 06 STATE 07 ZIP CODE 05 CITY 06 STATE 07 ZIP CODE

Unknown

01 NAME 02 D + B NUMBER 01 NAME 02 D + B NUMBER

03 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE 03 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE

05 CITY 06 STATE 07 ZIP CODE 05 CITY 06 STATE 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Telecon Note: Conversation between J. Ficheria, NYSDEC, and E. Leonard, NUS Corp., July 16, 1987.
Suffolk County Department of Health Services (SCHDS) Inspector's Notes, February 27, 1981, January 14, 1985 and
February 22, 1986.

II. PAST RESPONSE ACTIVITIES

01 A. WATER SUPPLY CLOSED	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		
01 B. TEMPORARY WATER SUPPLY PROVIDED	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		
01 C. PERMANENT WATER SUPPLY PROVIDED	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		
01 D. SPILLED MATERIAL REMOVED	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		
01 X E. CONTAMINATED SOIL REMOVED	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
Soil from side of building.	2/27/81	Art Weiner-Earth Moving
Soil, liquid, and sludge from loading	1/10/85	Chemical Pollution Control (CPC)
dock storm drains were removed.		
Soil from top of three abandoned ink waste tanks.	2/27/86	CPC
01 F. WASTE REPACKAGED	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		
01 G. WASTE DISPOSED ELSEWHERE	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		
01 H. ON SITE BURIAL	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		
01 I. IN SITU CHEMICAL TREATMENT	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		
01 J. IN SITU BIOLOGICAL TREATMENT	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		
01 K. IN SITU PHYSICAL TREATMENT	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		
01 L. ENCAPSULATION	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		
01 M. EMERGENCY WASTE TREATMENT	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		
01 N. CUTOFF WALLS	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		
01 O. EMERGENCY DIKING/SURFACE WATER DIVERSION	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		
01 P. CUTOFF TRENCHES/SUMP	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		
01 Q. SUBSURFACE CUTOFF WALL	02 DATE: _____	03 AGENCY: _____
04 DESCRIPTION		
No previous history.		

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D981184138

II. PAST RESPONSE ACTIVITIES

01 R. BARRIER WALLS CONSTRUCTED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 S. CAPPING/COVERING
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 T. BULK TANKAGE REPAIRED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 U. GROUT CURTAIN CONSTRUCTED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 V. BOTTOM SEALED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 W. GAS CONTROL
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 X. FIRE CONTROL
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 Y. LEACHATE TREATMENT
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 Z. AREA EVACUATED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 1. ACCESS TO SITE RESTRICTED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 2. POPULATION RELOCATED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

01 3. OTHER REMEDIAL ACTIVITIES
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Suffolk County Department of Health Services (SCHDS) Inspectors Notes, February 27, 1981, January 14, 1985, and February 27, 1986.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D981184138

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

3/13/81 Consent Order
Removal and proper disposal of soil, due to spill January 15, 1981. Imposed a \$500 civil penalty.

9/16/82 Consent Order
Immediately stop all discharge of toxic or hazardous materials. Provide proper storage and disposal of toxic or hazardous materials. Leak test the three underground storage tanks. Imposed a \$1,000 civil penalty.

7/9/85 Search Warrant Investigation
Conducted by the Environmental Crimes Unit - Office of District Attorney and aided by SCDHS.

11/12/85 Consent Order
Properly dispose of the toxic or hazardous liquid and sludge in the loading dock area. Clean and fill to grade the most western leaching pool. Properly abandon the three underground storage tanks. Provide proper storage and disposal of toxic or hazardous materials. Comply with all applicable state regulations for the industrial waste holding tank and the incinerator. Determine groundwater quality through the installation and sampling of monitoring wells.

1/30/86 Settlement
Convicted of Unlawful Discharge of Hazardous Waste in the Second Degree and fined \$25,000. Agreed to meet provisions from Consent Order of November 12, 1985.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, report)

Suffolk County Department of Health Services (SCHDS) Inspectors Notes, January 15, 1981 and July 9, 1985.
Suffolk County Department of Health Services (SCHDS) Consent Orders, September 16, 1982, and November 12, 1985.
Letter from F. Elsenbud, Assistant District Attorney, to Dr. Harris, Commissioner (SCHDS), March 31, 1986.
Log of Chronology of Events regarding Consent Order No. IW 82-49, Commercial Envelope Manufacturing Co. Inc.

SECTION 3

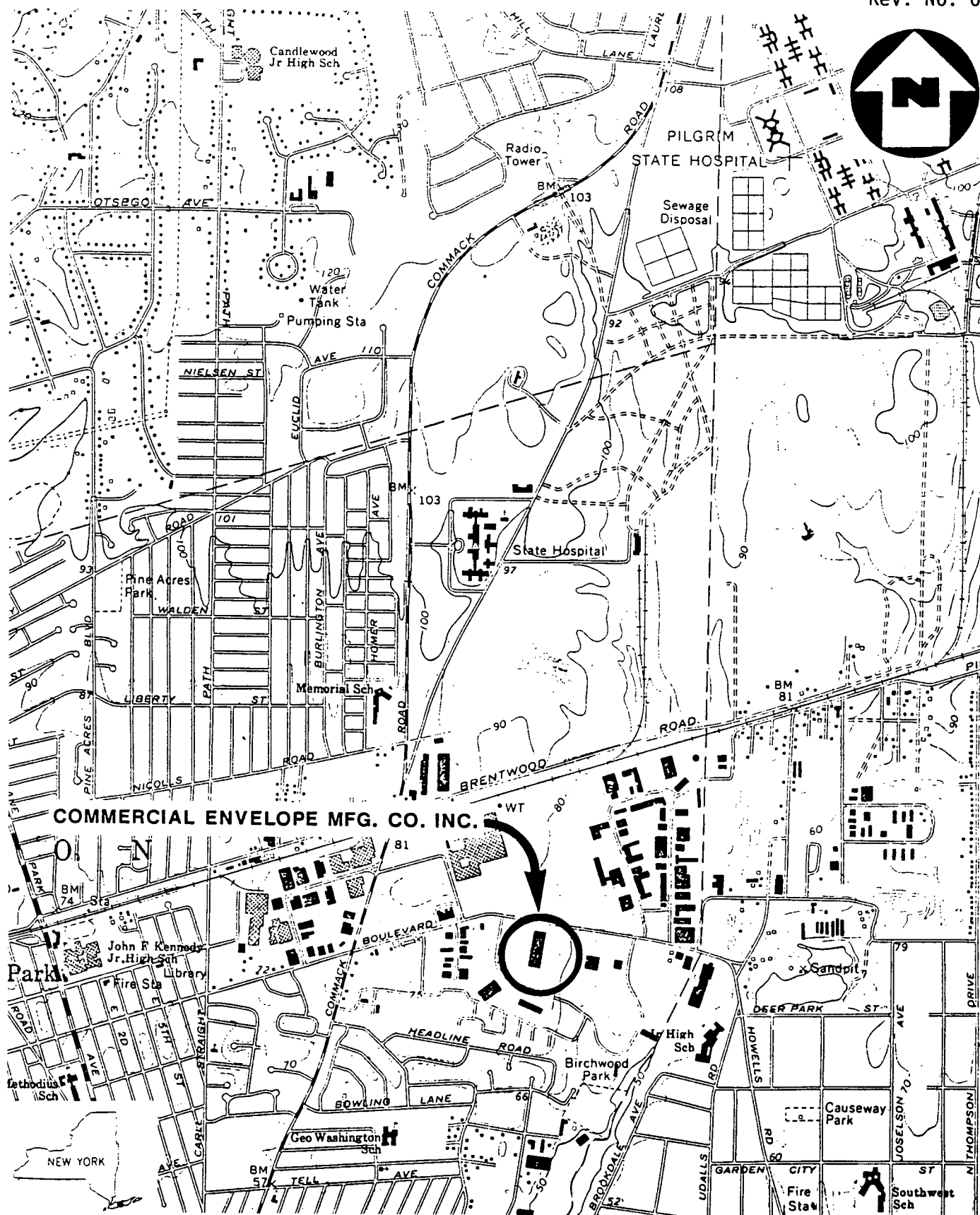
MAPS AND PHOTOGRAPHS

MAPS AND PHOTOS

COMMERCIAL ENVELOPE MANUFACTURING CO., INC.
DEER PARK, NEW YORK

CONTENTS

- Figure 1: Site Location Map
- Figure 2: Sample Location Map
- Exhibit A: Photograph Log



(QUAD) GREENLAWN, N.Y.

FIGURE 1

SITE LOCATION MAP
COMMERCIAL ENVELOPE MFG. CO. INC.,
DEER PARK, N.Y.

SCALE: 1"=2000'



(TW1)
● NYS1-GW3

LEGEND:

- SOIL SAMPLE
- GROUNDWATER SAMPLE

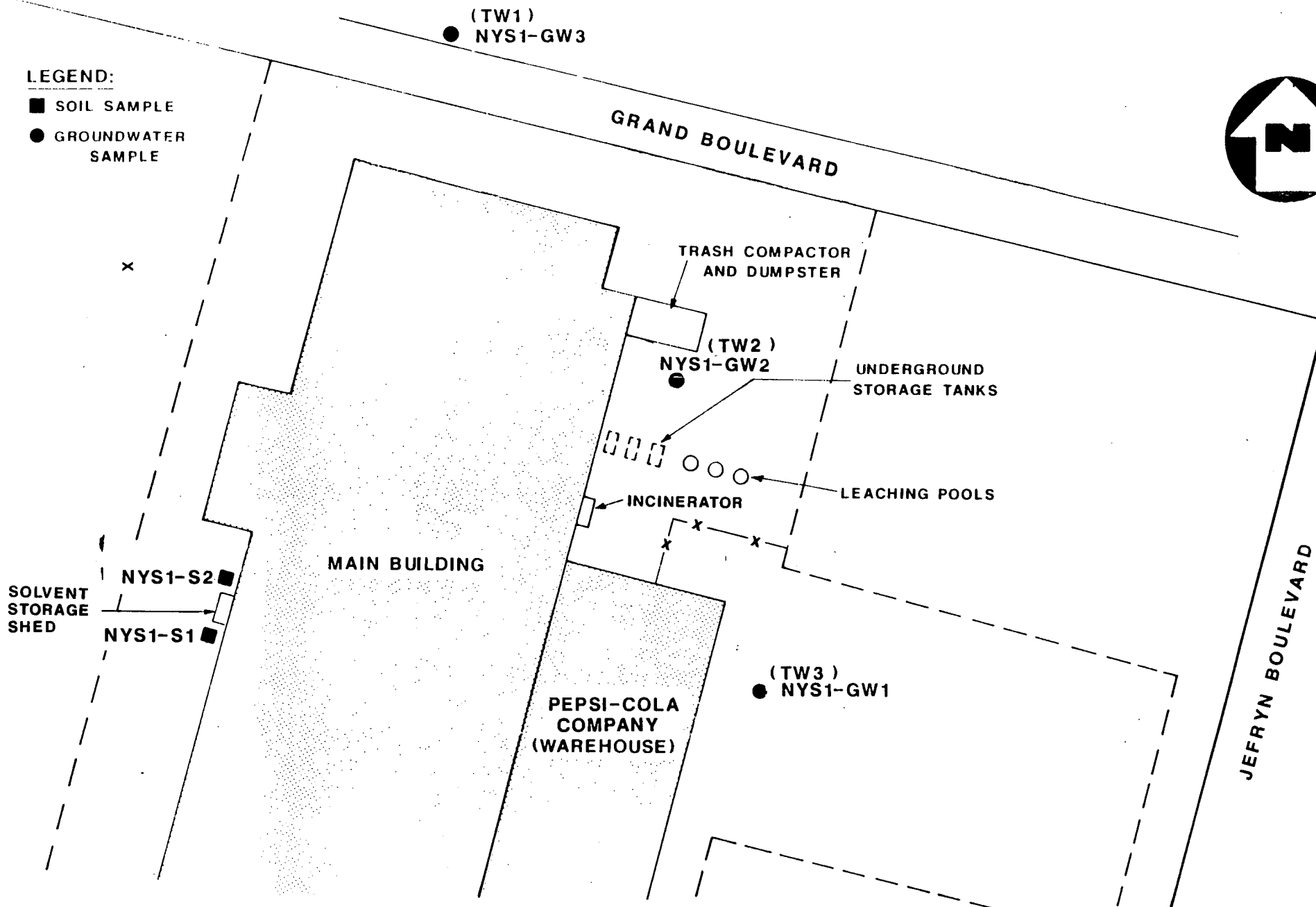


FIGURE 2

SAMPLE LOCATION MAP

COMMERCIAL ENVELOPE MFG. CO. INC., DEER PARK, N.Y.

(NOT TO SCALE)



02-8704-03-SR
Rev. No. 0

EXHIBIT A

PHOTOGRAPH LOG

COMMERCIAL ENVELOPE MANUFACTURING CO., INC.
DEER PARK, NEW YORK

SITE INSPECTION: JULY 13, 1987

COMMERCIAL ENVELOPE MANUFACTURING CO., INC.
DEER PARK, NEW YORK
JULY 13, 1987

PHOTOGRAPH INDEX

<u>Photo Number</u>	<u>Description</u>	<u>Time</u>
P1-9	Photograph of company sign in front of main building.	1716
P1-5	J. Murtaugh obtaining soil sample NYS1-S1.	1457
P1-6	J. Murtaugh obtaining soil sample NYS1-S2.	1510
P1-4	J. Murtaugh obtaining groundwater sample NYS1-GW1.	1351
P1-2	J. Murtaugh obtaining groundwater sample NYS1-GW2.	1231
P1-8	D. de Bruijn obtaining groundwater sample NYS1-GW3.	1704
	All photographs taken by E.L. Leonard.	



P1-9

July 13, 1987

1716

Photograph of company sign in front of main building.



P1-5

July 13, 1987

1457

J. Murtaugh obtaining soil sample NYS1-S1.



P1-6

July 13, 1987 1510
J. Murtaugh obtaining soil sample NYS1-S2.



P1-4

July 13, 1987 1351
J. Murtaugh obtaining groundwater sample NYS1-GW1.

COMMERCIAL ENVELOPE MFG. CO., INC. DEER PARK, NEW YORK



P1-2

July 13, 1987
J. Murtaugh obtaining groundwater sample NYS1-GW2.

1231



P1-8

July 13, 1987

1704

Dan de Bruijn obtaining groundwater sample NYS1-GW3.

SECTION 4

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS AND RECOMMENDATIONS

Several inorganic and volatile organic compounds were detected in groundwater and soil samples collected by NUS Corporation Region 2 FIT on July 13, 1987. Arsenic, cadmium, cobalt, and iron were detected in downgradient well samples in higher concentrations than in the upgradient sample. 1,1,1-Trichloroethane was detected in a downgradient sample at a higher concentration than the upgradient well sample. Vinyl chloride was detected in one downgradient sample and tetrachloroethene was detected in both downgradient samples; neither was detected in the upgradient sample. The only volatile detected in the soil was tetrachloroethene. A pesticide (Endosulfan sulfate) was also detected in the soil.

Groundwater provides the only source of potable water for the region. There is a potential for groundwater contamination to affect three municipal wells serving 111,300 residents within 3 miles of the facility. There is a potential for direct contact, with contaminants detected in the soil. The site is not fenced to prevent unauthorized access. Approximately 9,000 people reside within 1 mile of the site. Based on information provided, a **LISTING SITE INSPECTION** is recommended under CERCLA/SARA for the Commercial Envelope Mfg. Co., Inc. Site.

SECTION 5

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BIBLIOGRAPHY OF INFORMATION SOURCES

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SECTION 6

BACKGROUND INFORMATION

REFERENCE NO. 1

LONG ISLAND WATER RESOURCES
BULLETIN NUMBER 1

RESULTS OF SUBSURFACE EXPLORATION
IN THE MID-ISLAND AREA OF WESTERN SUFFOLK COUNTY,
LONG ISLAND, NEW YORK

BY
JULIAN SOREN
U. S. GEOLOGICAL SURVEY

WITH A SECTION ON
POTENTIAL DEVELOPMENT OF GROUNDWATER
IN THE MID-ISLAND AREA

BY
PHILIP COHEN
U. S. GEOLOGICAL SURVEY

PREPARED BY
U. S. GEOLOGICAL SURVEY
IN COOPERATION WITH
SUFFOLK COUNTY LEGISLATURE
SUFFOLK COUNTY WATER AUTHORITY

PUBLISHED BY
SUFFOLK COUNTY WATER AUTHORITY

1971

UPPER CRETACEOUS SERIES

Raritan Formation

Lloyd Sand Member

The Lloyd Sand Member of the Raritan Formation comprises the Lloyd aquifer on Long Island. This unit consists mostly of beds and lenses of light- to medium-gray sand and gravelly sand, commonly containing small to large amounts of interstitial clay and silt, that are intercalated with beds and lenses of light- to dark-gray clay, silt, and clayey and silty sand.

Only two drill holes are known to have penetrated the Lloyd in the mid-island area. One hole partly penetrated the unit at the Pilgrim State Hospital, in Brentwood. The second hole, which is in the village of Lake Ronkonkoma, and which was one of the test holes drilled as part of this study, fully penetrated the unit. A log of the test hole describing lithology of the Lloyd is shown in table 1, S33379.

The surface of the Lloyd is roughly parallel to the bedrock surface. The Lloyd surface dips from an altitude of about 550 feet below sea level in the northwestern part of the area, to an altitude of about 1,250 feet below sea level in the southeastern part (pl. 2), and the unit's thickness ranges from about 260 feet to 360 feet from northwest to southeast, respectively. Plate 2 shows contours on the Lloyd surface. Plate 2 also shows contours on the bedrock surface; therefore, the Lloyd's thickness, in any part of the area, can be estimated by computing the local difference between the altitudes of the bedrock and Lloyd surfaces.

The Lloyd aquifer is moderately permeable. Its average horizontal permeability has been estimated by Lusczynski and Swarzenski (1966, p. 19), Isbister (1966, p. 20), and Soren (in press) to range between 400 and 500 gpd per sq ft (gallons per day per square foot) in Queens and Nassau Counties, west of the mid-island area. Warren and others (1968, p. 102) estimated the Lloyd's horizontal permeability to be 165 gpd per sq ft at the Brookhaven National Laboratory, about 12 miles east of the mid-island area. The section of Lloyd penetrated by the test well near Lake Ronkonkoma was fairly sandy and gravelly (table 1, S33379), and at this site the average horizontal permeability of the Lloyd probably is considerably more than 500 gpd per sq ft. Wells tapping the Lloyd in other parts of Long Island have been pumped at rates of as much as 1,600 gpm (gallons per minute), and the specific capacities of these wells (pumpage, in gallons per minute, divided by drawdown, in feet) have been reported to range from 3 to 40 gpm per foot of drawdown.

At present, there is no pumpage from the Lloyd aquifer in the mid-island area, mainly because of the great depth of the aquifer, and because more permeable aquifers are found at shallower depths. In addition to being at a greater depth, the water from the Lloyd commonly has undesirably high concentrations of iron.

Clay Member

The clay member of the Raritan Formation (commonly referred to as the Raritan clay) completely covers the underlying Lloyd aquifer in the mid-island area, and confines water in that aquifer. The Raritan clay consists mostly of beds and lenses of light- to dark-gray clay, silt, and clayey and silty fine sand (table 1). Thin to thick sandy beds commonly occur in the unit from place to place, but these beds do not have great lateral extent. Laminae and thin beds of lignite and pyrite and disseminated particles of these substances are common in the clay beds of the unit. The thickness of the Raritan clay increases to the southeast, and ranges from about 150 feet in the northwestern part of the mid-island area to about 200 feet in the southeastern part.

The surface of the Raritan clay is roughly parallel to that of the underlying Lloyd Sand Member. The altitude of the surface of the Raritan clay ranges from about 300 feet below sea level in the northwestern part of the mid-island area, to about 1,050 feet below sea level in the southeastern part (pl. 3).

Matawan Group-Magothy Formation, Undifferentiated

The Matawan Group-Magothy Formation, undifferentiated, comprises the Magothy aquifer of Long Island. Deposits in this unit consist of beds and lenses of light-gray fine to coarse sand, containing traces to large amounts of interstitial clay and silt, intercalated with thin to thick beds and lenses of light- to dark-gray clay, silt, and clayey and silty sand (table 1). The clay and silt beds commonly contain laminae and thin beds of lignite. Disseminated lignite and pyrite also are common in the sand beds of the aquifer. Gravelly coarse sand is commonly found in the basal part of the aquifer. This coarse zone ranges in thickness from 100 to 150 feet west of the mid-island area to 150 to 200 feet in the mid-island area. The basal zone also commonly contains abundant interstitial clay and silt and many thin to thick beds and lenses of clay, silt, and clayey and silty sand.

The surface of the Magothy aquifer (pl. 4) is not planar as are the surfaces of the underlying units. The Magothy surface was deeply eroded during Tertiary time, and probably was considerably eroded in Pleistocene time. Consequently, the depth to the Magothy aquifer and the aquifer's thickness cannot be predicted as accurately as the depths and thicknesses of the underlying units. Many control points in addition to those already known are needed to accurately map the upper surface of the Magothy aquifer.

The highly irregular character of the surface of the Magothy aquifer is shown in plate 4. The upper surface of the aquifer ranges in altitude from as high as about 200 feet above sea level to as low as about 500 feet below sea level. The Magothy was completely removed by erosion in a buried valley near the South Huntington area, and in that area upper Pleistocene deposits lie directly on the Raritan clay. This buried valley was called the "Huntington buried valley" by Lubke (1964, pl. 3), and as mapped by Lubke, the valley extended about 2-1/2 miles south of the Northern State Parkway.

Information from wells drilled after Lubke's investigation indicates that the Huntington buried valley continues southeastward, joining another buried valley in the Deer Park area. From Deer Park, the valley appears to extend southeastward across Long Island to the Fire Island Pines area of Fire Island, about 10 miles southeast of Deer Park, where the Magothy surface was shown to be about 350 feet below sea level by Perlmutter and Todd (1965, pl. 8).

The Huntington and Deer Park buried valleys are separated by a divide across the buried valley system in the Deer Park area. The Huntington buried valley slopes steeply northwestward from the divide; the Deer Park buried valley has a gentle southward slope toward the Fire Island Pines area. The divide across the valley approximately coincides with the southern margin of the Ronkonkoma terminal moraine. (See the following section, "Pleistocene Series.") The steeper Huntington buried valley was probably overdeepened by scouring action of Pleistocene glaciation. Other buried valleys in the northern part of the mid-island area (pl. 4) are not as deep nor as extensive as the Huntington and Deer Park buried valleys.

A large depression in the Magothy surface is apparent in the St. James-Ronkonkoma area. Lubke (1964, pl. 3) showed the Magothy surface to be more than 200 feet below sea level in this area. More recent information indicates that the Magothy surface in this area is more than 500 feet below sea level (pl. 4). This large depression is here called the Ronkonkoma basin (pls. 4-5). The precise origin of this basin is not known, but it probably was at least partly a result of Pleistocene glacial scouring of a pre-existing valley system. The depression appears to have had no outlet, and its southernmost end coincides approximately with the southern margin of the Ronkonkoma terminal moraine.

Representative thicknesses of the Magothy aquifer are shown in geologic sections in plate 5. In these sections, the thickness of the Magothy ranges from about 300 to 800 feet. The estimated thickness of the Magothy aquifer in any part of the mid-island area can be computed by determining the difference between altitudes of the Magothy and Raritan surfaces as shown in plates 3 and 4. The Magothy aquifer is thickest (about 950 feet) in the southeastern corner of the project area, and it is thinnest in the bottom of the buried valleys. As previously noted, the aquifer is completely missing in part of the buried valley near South Huntington (pl. 4).

The permeability of the Magothy aquifer ranges widely. The estimated average horizontal permeability of the aquifer is about 500 gpd per sq ft in Nassau and Queens Counties (Luszczynski and Swarzenski, 1966, p. 19; Isbister, 1966, p. 23-24; and Soren, in press); however, the permeabilities of some beds in the aquifer may be as high as 2,000 gpd per sq ft (Isbister, 1966, p. 23). Public-supply wells screened in the Magothy aquifer of the mid-island area have yielded as much as 1,700 gpm, with specific capacities ranging from about 14 to 85 gpm per ft of drawdown.

PLEISTOCENE SERIES

Upper Pleistocene deposits

Pleistocene deposits of glacial origin mantle the surface of the mid-island area (pl. 1) and range in thickness from a few tens of feet in some localities to more than 600 feet in buried valleys. The approximate thickness of Pleistocene deposits at any place generally can be computed by determining the difference between the altitude of the land surface and the altitude of the surface of the Magothy aquifer.

Most and perhaps all the glacial materials on Long Island were deposited in Wisconsin time, and these materials generally are collectively termed upper Pleistocene deposits. The upper Pleistocene deposits in the mid-island area include terminal moraines, outwash deposits, ground moraine, and lake deposits. The Harbor Hill and Ronkonkoma terminal moraines form the irregular ridges trending east-northeast across the area. Outwash deposits derived from melted glacial ice lie south of the Ronkonkoma terminal moraine. Glacial lake deposits, which apparently were formed between the Ronkonkoma and Harbor Hill advances of the glaciers, lie within outwash deposits below the land surface, and occur mostly between the terminal moraines in the eastern half of the area, most notably in the Smithtown-St. James-Ronkonkoma area.

Ronkonkoma Terminal Moraine

The Ronkonkoma terminal moraine marks the farthest advance of glaciation on Long Island. The moraine is composed largely of crudely stratified sand and gravel. It underlies the highest parts of the mid-island area, tapering from an irregular broad band in the western part, to an irregular narrow ridge in the eastern part. (See plate 1.) The unit lies mostly above the water table and is, therefore, practically of no significance as a source of ground water; however, it is a difficult unit to drill through because of the large amounts of gravel, cobbles, and scattered boulders that it contains.

Harbor Hill Terminal Moraine

Only a very small part of this moraine is found in the mid-island area, in the extreme northwest corner near South Huntington (pl. 1). Most of this moraine is north of the mid-island area. The moraine's lithology and water-bearing characteristics are similar to those of the Ronkonkoma terminal moraine.

Outwash Deposits

The outwash deposits, which are found south of the Ronkonkoma terminal moraine and between the Harbor Hill and Ronkonkoma terminal moraines (fig. 2), are beds of sand and gravel that were deposited by glacial melt water. The

source of the rock materials in the outwash deposits is manifold. As the glaciers moved southward to Long Island, they plucked the bedrock and soils of the surfaces they slid over. Rock materials were incorporated into the ice in contact zones and were also pushed along the glacial front. As the ice melted in late Pleistocene time, the various rock materials were carried away by broad coalescing streams and sheets of water. Consequently, the outwash deposits are stratified, and because of the varied materials carried by the glacier, these deposits consist of a heterogeneous suite of rock types. The great diversity of rock and mineral suites in the Pleistocene deposits, along with the chemically unstable (easily decomposed) rocks and minerals, commonly facilitates differentiation of glacial from the Cretaceous deposits on Long Island.

Outwash deposits underlie the plain in the mid-island area south of the Ronkonkoma terminal moraine, where the major source of glacial deposition was material from the Ronkonkoma ice advance. A readvance of the glacial front followed recession of the Ronkonkoma ice front and resulted in the formation of the Harbor Hill terminal moraine. Lakes were formed in depressions and valleys between the Ronkonkoma and Harbor Hill terminal moraines, and clayey materials were deposited in these lakes. The inter-morainal areas also contain recessional deposits of outwash and ground moraine (see the following section, "Ground-Moraine Deposits") from the Ronkonkoma and Harbor Hill deglaciations, and these materials buried the clayey lake deposits.

The outwash deposits are thickest in the buried valleys and thinnest where the Cretaceous surface is closest to land surface (pl. 5). These deposits generally extend below the water table, and are a major source of ground water. Outwash deposits comprise most of the so-called upper glacial aquifer of Long Island, and because these deposits of sand and gravel contain virtually no interstitial clay and silt, the upper glacial aquifer is the most permeable aquifer on Long Island. The estimated average horizontal permeability of the outwash deposits is about 1,000 to 1,500 gpd per sq ft (Luszczynski and Swarzenski, 1966, p. 17; and Soren, in press). Warren and others (1968, p. 75) computed the horizontal permeability of outwash to be about 1,300 gpd per sq ft at the Brookhaven National Laboratory, east of the mid-island area. A horizontal permeability for outwash as high as about 2,500 gpd per sq ft has been reported in Nassau County, west of the project area (Isbister, 1966, p. 29).

Public-supply and other high-capacity wells screened in glacial outwash on Long Island have yielded as much as 1,700 gpm, and reported specific capacities of such wells range from less than 10 gpm per foot of drawdown to as much as about 200 gpm per foot of drawdown; however, the specific capacities range mostly from 50 to 100 gpm per foot of drawdown. (See section "Yields of Individual Wells.")

Ground-Moraine Deposits

Ground-moraine deposits commonly consist of unstratified and unsorted clay, silt, sand, gravel, cobbles, and boulders, deposited on the land surface as the glacial fronts receded. Ground-moraine deposits from the Ronkonkoma advance probably occur beneath the outwash in the area between the Ronkonkoma and Harbor Hill terminal moraines. Some ground-moraine deposits probably were partly reworked by glacial melt water from the Harbor Hill advance and probably appear similar to outwash in drilling samples.

Lake Deposits

A large lake apparently existed between the Ronkonkoma and Harbor Hill terminal moraines in the previously described Ronkonkoma basin. Deposits of light- to dark-brown and gray clay and silt of lacustrine origin, with some included beds of sand and gravel, occur between deposits of outwash in this area. The deposits are informally known as the Smithtown clay unit or Smithtown clay, and they were mapped and described by Lubke (1964, p. 22 and 26) as the "clay unit of Smithtown." Thin to significant thicknesses of this unit were penetrated at four of the test-drilling sites in the eastern half of the mid-island area. (See plate 5 and table 1, S22577, S22910T, S24769, and S24772). Apparently, it is thickest near the community of Lake Grove (not shown in plate 1) about 2.5 miles north of Lake Ronkonkoma, where about 300 feet of Pleistocene clay beds were penetrated in a drilled test hole (Jensen, H. M., oral commun., 1969).

Smaller glacial lakes probably also existed in other parts of the inter-morainal area. Many drilling logs from localities in the area indicate thin intercalated clay and fine sand beds between sand and gravel deposits. The extent of these lakes is not fully known, and they were probably small compared to the lake in which the Smithtown clay was deposited.

Veatch and others (1906, p. 61) suggested that present Lake Ronkonkoma, in the eastern part of the mid-island area, is in a depression made by a large ice block that was detached from the main glacial-front mass and buried by outwash deposits. Subsequent melting of the ice block presumably caused the depression in the land surface which then filled with water. Inasmuch as this study has shown that present Lake Ronkonkoma is in the Ronkonkoma basin, it seems possible that the location of the lake may merely reflect the fact that the ancient Ronkonkoma basin was not completely filled by glacial deposits.

The lake deposits do not yield significant quantities of water to wells because they are fine-textured and, accordingly, poorly permeable. However, the lake beds are hydrologically significant because they confine water in the underlying outwash deposits.

Miscellaneous Deposits

The Mannetto Gravel, of Pliocene age, and the Gardiners Clay, a Pleistocene interglacial marine deposit of pre-Wisconsin age, are two additional units of hydrologic significance in some parts of Long Island. However, their location and extent in the project area are poorly known, and they seem to occur in only a small part of the area.

The Mannetto Gravel was described and mapped by Fuller (1914, p. 80-85) from the western edge of the mid-island area to about as far east as the area between Wyandanch and Deer Park. The unit reportedly crops out at the tops of high hills, or near the crests of high hills capped by Ronkonkoma terminal moraine deposits. The author could not verify the location and extent of the Mannetto; consequently, the unit is not shown on the surficial geology map (pl. 1).

The Gardiners Clay is an interglacial marine deposit of Sangamon age. It is generally found in the south shore areas of Long Island where the depth to its surface is commonly 40 or more feet below sea level. The Gardiners Clay overlies Matawan-Magothy strata south of the mid-island area (Perlmutter and Todd, 1965, pl. 8), and some clay beds reported by well drillers in the southern part of the buried valley near Deer Park may be Gardiners Clay. However, this is uncertain, and the unit may not be present in the project area.

GROUND-WATER SYSTEM

SOURCE AND MOVEMENT OF GROUND WATER

The ground water on Long Island has its origin in precipitation that falls on the island. According to Cohen and others (1968, p. 36, 40, and 44), the precipitation on Long Island is disposed of as follows: nearly half returns to the atmosphere by evapotranspiration; a very small amount enters streams by direct runoff; and the remaining half percolates downward through the unconsolidated deposits to the water table and enters the ground-water reservoir.

The general ground-water movement on Long Island is from recharge areas near the center of the island to discharge areas at and near the shorelines. Ground water discharges by seepage into streams and by direct subsurface outflow into salty ground water, which in turn is hydraulically connected with bodies of salty surface water.

The horizontal components of the directions of ground-water flow in the upper glacial aquifer are shown in plate 6. In the vicinity of the major ground-water divide in the mid-island area (pl. 6), ground water generally moves downward from the upper glacial aquifer into the Magothy aquifer, and thence through the Raritan clay into the Lloyd aquifer. The vertical components of downward flow decrease with increasing distance both northward and southward of the divide. Beyond the northern and southern margins of the mid-island area, ground-water flow becomes virtually horizontal. Near

the shorelines, the direction of flow is reversed, and ground-water movement is upward from the deeper aquifers toward the surface. Thus, because of the character of the flow system, under natural conditions virtually all the recharge to the Magothy and Lloyd aquifers in western Suffolk County originated in the mid-island area, and all of that recharge ultimately discharged from the ground-water system near the shorelines.

The movement of ground water through Long Island's aquifers in the horizontal direction is generally more rapid than movement in the vertical direction because of the occurrence of interbedded fine- and coarse-grained layers, and because the largest dimensions of unevenly shaped particles in the individual layers tend to be oriented horizontally. Approximate rates of ground-water movement can be computed from hydraulic gradients and estimated coefficients of permeability and porosities of the aquifers. In 1968, water in the upper glacial aquifers in the project area was moving horizontally at rates from less than 0.5 foot per day at points distant from centers of pumping, to hundreds of feet per day near the screens of pumping wells. At the same time, water in the Magothy aquifer was moving horizontally at rates from less than 0.2 foot per day at points distant from pumping, to hundreds of feet per day near the screens of pumping wells.

HYDRAULIC INTERCONNECTION OF AQUIFERS

The aquifers of Long Island are hydraulically interconnected. Layers of clay and silt within an aquifer or between aquifers serve to confine water below them, but they do not completely prevent the vertical movement of water through them. Ground water moves downward readily through coarse outwash deposits in the upper glacial aquifer. Vertical movement of water through the Magothy aquifer is impeded by beds and lenses of clay and silt. Because the clay and silt strata in the Magothy are not continuous, some water may move around lenses of this material in addition to moving slowly through the fine-grained strata.

The contact between the upper glacial and Magothy aquifers is not regular either in attitude or in composition of the contact surfaces. Glacial deposits in buried valleys are in lateral contact with truncated sandy beds in the Magothy. In the buried valleys water can laterally enter the Magothy at great depth directly from the glacial deposits, rather than the water having to move vertically to the same depth through less permeable Magothy beds. In the Huntington buried valley, glacial deposits extend completely through the Magothy aquifer to the underlying Raritan clay. (See plate 4.) In addition to the good hydraulic continuity between the upper glacial and Magothy aquifers in the buried valleys, good hydraulic continuity occurs between the aquifers outside the buried valleys where glacial sand and gravel deposits lie directly on Magothy sand beds. Thus, a fairly good hydraulic connection exists between the upper glacial and Magothy aquifers over large parts of the mid-island area, and the configuration of the piezometric surface of the Magothy aquifer is generally similar to that of the water table. However, in the mid-island area hydraulic heads in the Magothy are lower than those in the upper glacial aquifer because of the downward component of ground-water movement in the area.

The thick areally persistent Raritan clay that lies between the Magothy and Lloyd aquifers impedes but does not prevent downward movement of ground water into the Lloyd aquifer, and water in the Lloyd is tightly confined between the Raritan clay and bedrock. Downward leakage into the bedrock is negligible.

Figures 2 and 3 show hydrographs of wells screened in the upper glacial aquifer and the Magothy aquifer at the test-drilling sites in Brentwood and Hauppauge. At both sites, the heads in the deepest wells in the Magothy aquifer are about 2.5 to 3 feet lower than the heads in the shallowest wells in the upper glacial aquifer. The loss of head downward reflects the downward movement of ground water in the mid-island area. The hydrographs in figures 2 and 3 show that the heads in these two aquifers in the project area decrease at a fairly uniform rate with increasing depth. In addition, water-level fluctuations in the two groups of wells were very similar. Both of these facts, the uniform decrease in head and the similar water-level fluctuations, reflect the high degree of hydraulic interconnection between the upper glacial and Magothy aquifers.

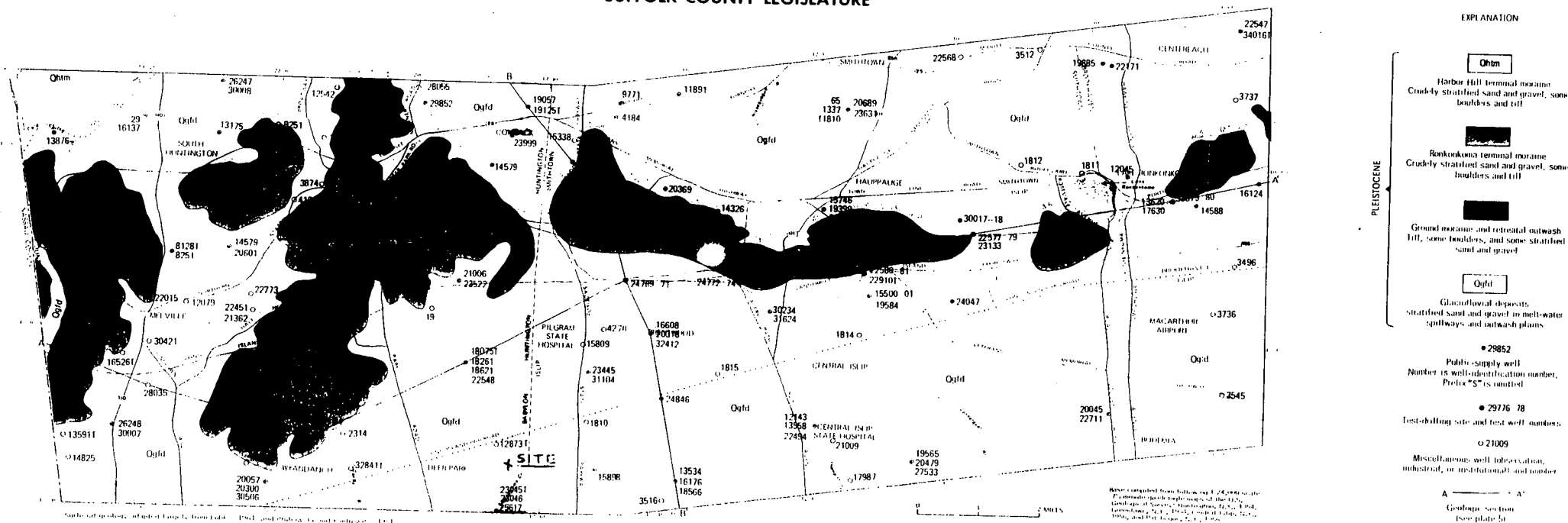
The average vertical permeability of the Magothy aquifer is only poorly known. Estimates range from less than 1 to about 30 gpd per sq ft. Assuming that it averages about 5 gpd per sq ft in the mid-island area, the computed amount of downward ground-water movement through the Magothy aquifer in the vicinity of the ground-water divide in 1968 was about 0.4 mgd (million gallons per day) per square mile, and the estimated velocity of the downward movement was about 0.006 foot per day.

Because of the low permeability of the Raritan clay, the hydraulic-head loss across this unit is very much larger than the head loss across a comparable thickness of the Magothy and upper glacial aquifers. At the easternmost test site in the village of Lake Ronkonkoma, wells were screened near the base of the Magothy and near the top of the Lloyd aquifers (pl. 5, section A-A', S33379-80). In 1968, the head near the base of the Magothy aquifer (about 45.5 feet above sea level) was about 11.5 feet higher than the head in the Lloyd aquifer (about 34 feet above sea level). Head losses across the Raritan clay at localities east and west of the Lake Ronkonkoma area differ considerably. At Upton, about 12 miles east of the mid-island area, the head loss across the clay was about 6 feet in 1968; and at Plainview (in Nassau County), about 3 miles southwest of Melville, the head loss across the clay was about 42 feet. The differences in head loss from place to place are largely a result of differences in the vertical permeability and thickness of the Raritan clay.

The head in the Lloyd aquifer at Lake Ronkonkoma in 1968 (about 34 feet above sea level) was higher than either of the heads in the Lloyd at Upton (about 30.5 feet above sea level) and at the Suffolk-Nassau boundary (about 27.5 feet above sea level). The head in the Lloyd at Terryville, about 7 miles northeast of the Ronkonkoma area was about 21 feet above sea level in 1968, and it was 19 feet above sea level at Fire Island State Park in 1968, about 13 miles to the southwest. These data suggest that water in the Lloyd aquifer is moving radially from the Lake Ronkonkoma area. The estimated rate of horizontal movement of water in the Lloyd aquifer in the project area in 1968, was on the order of 0.1 foot per day.

IN COOPERATION WITH THE
SUFFOLK COUNTY WATER AUTHORITY
AND
SUFFOLK COUNTY LEGISLATURE

LONG ISLAND WATER RESOURCES BULLETIN NUMBER 1 PLATE 1
PUBLISHED BY SUFFOLK COUNTY WATER AUTHORITY



MAP OF MID-ISLAND AREA SHOWING SURFICIAL GEOLOGY AND LOCATIONS OF SELECTED WELLS

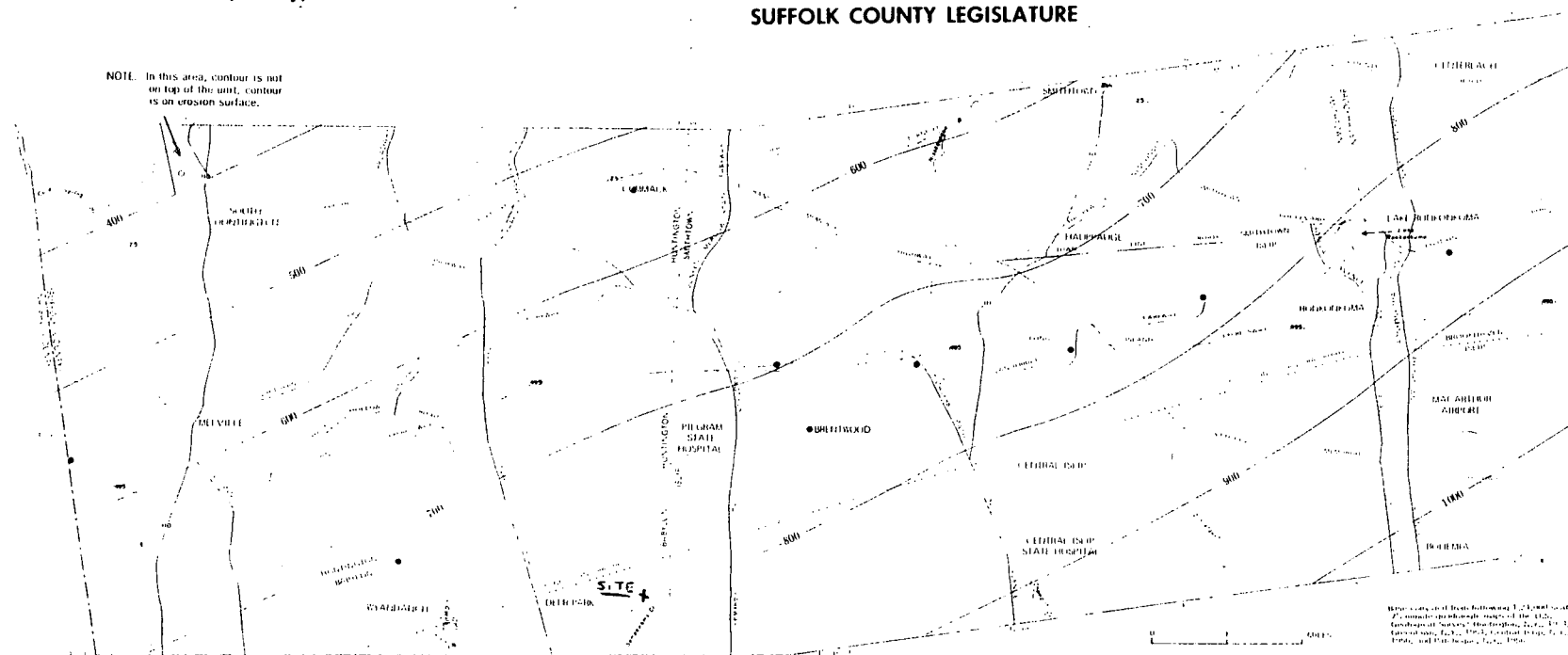
Geochimica et Cosmochimica Acta

Prepared by
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY, Albany, N.Y.

IN COOPERATION WITH THE
SUFFOLK COUNTY WATER AUTHORITY
AND
SUFFOLK COUNTY LEGISLATURE

LONG ISLAND WATER RESOURCES BULLETIN NUMBER 1 PLATE 3
PUBLISHED BY SUFFOLK COUNTY WATER AUTHORITY

NOTE: In this area, contour is not
on top of the unit, contour
is on erosion surface.



EXPLANATION

--- 100 ---
Structure contour
Shows altitude of top of clay
member of Raritan Formation.
Contour interval, 100 feet.
Datum is mean sea level.
(Control based in part on data
outside area.)

● Well that penetrates
clay member surface

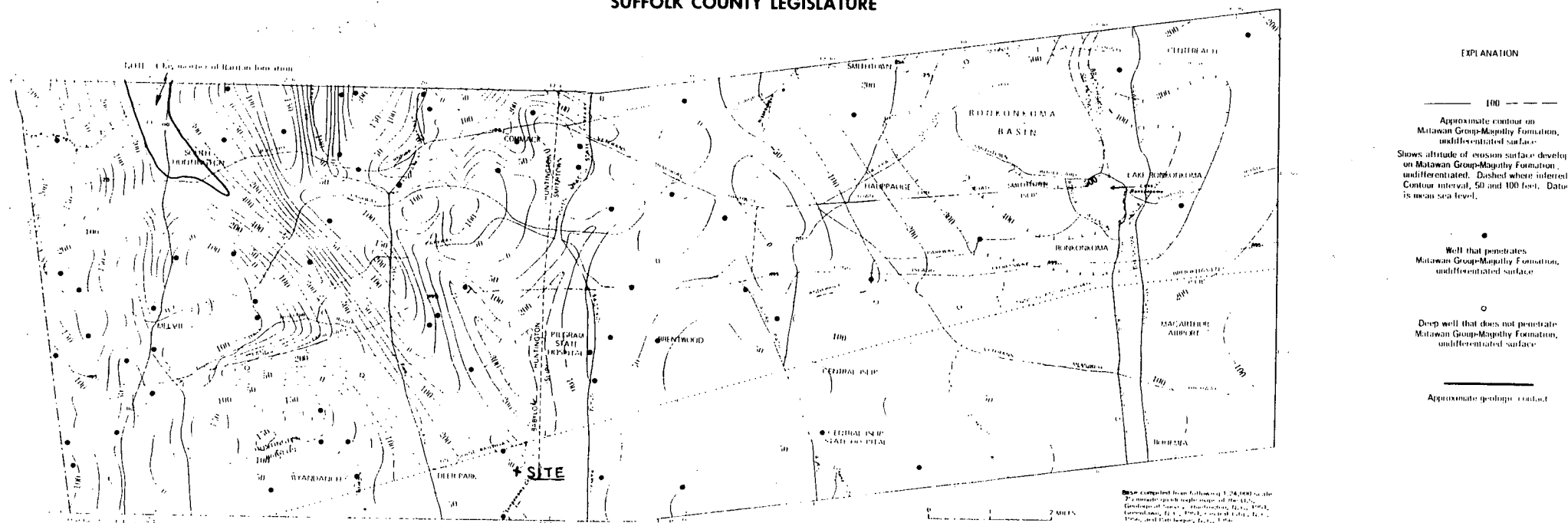
○ Deep well that does not
penetrate clay member surface

When contour of beds following 1:24,000 scale
is compared with map of the
"Geological Survey" of the
"United States" (New York, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 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2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 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IN COOPERATION WITH THE
SUFFOLK COUNTY WATER AUTHORITY
AND
SUFFOLK COUNTY LEGISLATURE

LONG ISLAND WATER RESOURCES BULLETIN NUMBER 1 PLATE 4
PUBLISHED BY SUFFOLK COUNTY WATER AUTHORITY



MAP OF MID-ISLAND AREA SHOWING CONTOURS ON THE SURFACE OF THE MATAWAN GROUP-MAGOTHY FORMATION, UNDIFFERENTIATED

REFERENCE NO. 2

Summary of the - Hydrologic Situation on Long Island, New York, as a Guide to Water-Management Alternatives

By O. L. FRANKE and N. E. McCLYMONDS

HYDROLOGY AND SOME EFFECTS OF URBANIZATION ON
LONG ISLAND, NEW YORK

GEOLOGICAL SURVEY PROFESSIONAL PAPER 627-F

*Prepared in cooperation with the New York
State Department of Conservation, Division
of Water Resources; the Nassau County
Department of Public Works; the Suffolk
County Board of Supervisors; and the
Suffolk County Water Authority*



UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1972

TABLE 2.—Summary of the rock units and their water-bearing properties, Long Island, N.Y.—Continued

System	Series	Geologic unit	Hydro-geologic unit	Approximate maximum thickness (feet)	Depth from land surface to top (feet)	Character of deposits	Water-bearing properties
Cretaceous	Upper Cretaceous	Unconformity					
		Clay member	Raritan clay	300	70-1,500	Clay, solid and silty; few lenses and layers of sand; little gravel. Lignite and pyrite are common. Colors are gray, red, and white, commonly variegated.	Poorly to very poorly permeable; constitutes confining layer for underlying Lloyd aquifer. Very few wells produce appreciable water from these deposits.
		Lloyd Sand Member	Lloyd aquifer	500	200-1,800	Sand, fine to coarse, and gravel, commonly with clayey matrix; some lenses and layers of solid and silty clay; contains thin lignite layers and iron concretions locally. Locally, has gradational contact with overlying Raritan clay. Sand and most of gravel are quartzose. Colors are yellow, gray, and white; clay is red locally.	Poorly to moderately permeable. Specific capacities of wells in the Lloyd generally range from 1 to about 25 gpm per foot of drawdown, rarely are as much as 50 gpm per ft. Water is confined under artesian pressure by overlying Raritan clay; generally of excellent quality but has high iron content locally. Has been invaded by salty ground water locally in necks near north shore, where aquifer is mostly shallow and overlying clay discontinuous. Called deep confined aquifer in some earlier reports.
Precambrian		Unconformity					
		Bedrock	Bedrock	-----	0-2,700	Crystalline metamorphic and igneous rocks; muscovite-biotite schist, gneiss, and granite. A soft clayey zone of weathered bedrock locally is more than 100 ft thick.	Poorly permeable to virtually impermeable; constitutes virtually the lower boundary of ground-water reservoir. Some hard, fresh water is contained in joints and fractures, but is impracticable to develop at most places; however, a few wells near the western edges of Queens and Kings Counties obtain water from the bedrock.

The fresh-salt water interface is not a sharp boundary. The horizontal distance over which the dissolved-solids content of ground water changes from completely fresh to completely salty is generally on the order of 2-3 thousand feet near the south shore of Long Island. Over this distance, the dissolved-solids content of the ground water increases at first gradually in the direction of the salty ground water and then more rapidly.

The fresh-salt water interface is a complex streamline surface, and fresh ground water discharging into the ocean and bays moves parallel to the interface and not across it. The hydrodynamics of a stable interface and, to an even greater degree, an unstable interface that changes position in response to changes in head within the ground-water reservoir, is complicated and beyond the scope of this report. (See Luszczynski, 1961; Cooper, 1964; and Kohout, 1964.)

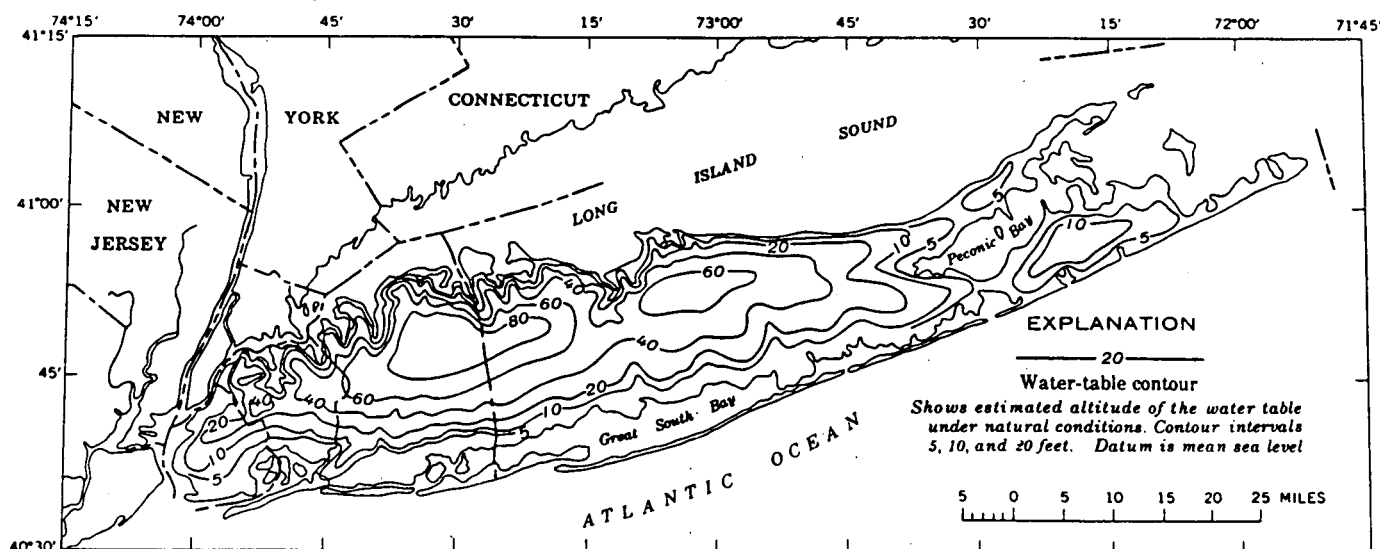


FIGURE 9.—Estimated average position of the water-table under natural conditions.

HYDROLOGY AND SOME EFFECTS OF URBANIZATION ON LONG ISLAND, NEW YORK

TABLE 2.—Summary of the rock units and their water-bearing properties, Long Island, N.Y.

[After McClymonds and Franke, 1971]

System	Series	Geologic unit	Hydro-geologic unit	Approximate maximum thickness (feet)	Depth from land surface to top (feet)	Character of deposits	Water-bearing properties
Quaternary	Holocene	Artificial fill, salt marsh deposits, stream alluvium, and shoreline deposits.	Holocene deposits	50	0	Sand, gravel, clay, silt, organic mud, peat, loam, and shells. Colors are gray, brown, green, black, and yellow. Holocene artificial-fill deposits of gravel, sand, clay, and rubbish.	Permeable sandy beds beneath barrier beaches yield fresh water at shallow depths, brackish to salty water at greater depth. Clay and silt beneath bays retard salt-water encroachment and confine underlying aquifers. Stream-flood-plain and marsh deposits may yield small quantities of water, but are generally clayey or silty and much less permeable than underlying upper glacial aquifer.
	Pleistocene	Upper Pleistocene deposits	Upper glacial aquifer	600	0-50	Till (mostly along north shore and in moraines) composed of clay, sand, gravel, and boulders. Forms Harbor Hill and Ronkonkoma terminal moraines. Outwash deposits (mostly between and south of terminal moraines, but also interlayered with till) consist of quartzose sand, fine to very coarse, and gravel, pebble to boulder sized. Glaciolacustrine deposits (mostly in central and eastern Long Island) and marine clay (locally along south shore) consist of silt, clay, and some sand and gravel layers; includes "20-foot clay" in southern Nassau County and Queens County. Colors are mainly gray, brown, and yellow; silt and clay locally are grayish green. Contains shells and plant remains, generally in finer grained beds; also contains Foraminifera. Contains chlorite, biotite, muscovite, hornblende, olivine, and feldspar as accessory minerals; "20-foot clay" commonly contains glauconite.	Till is poorly permeable; commonly causes perched-water bodies and impedes downward percolation of water to underlying beds. Outwash deposits are moderately to highly permeable; specific capacities of wells tapping them range from about 10 to more than 200 gpm per foot of drawdown. Good to excellent infiltration characteristics. Glaciolacustrine and marine clay deposits are mostly poorly permeable, but locally have thin moderately permeable layers of sand and gravel; generally retard downward percolation of ground water. Contains fresh water, except near the shorelines. Till and marine deposits locally retard salt-water encroachment.
		Unconformity?					
		Gardiners Clay	Gardiners Clay	300	50-400	Clay, silt, and few layers of sand and gravel. Colors are grayish green and brown. Contains marine shells, Foraminifera, and lignite; also glauconite, locally. Altitude of top generally is 50-80 ft below mean sea level. Occurs in Kings and Queens Counties, southern Nassau County, and Suffolk County; similar clay occurs in buried valleys near north shore.	Poorly permeable; constitutes confining layer for underlying Jameco aquifer. Locally, sand layers yield small quantities of water.
		Unconformity?					
		Jameco Gravel	Jameco aquifer	300	50-550	Sand, fine to very coarse, and gravel to large-pebble size; few layers of clay and silt. Gravel is composed of crystalline and sedimentary rocks. Color is mostly dark brown. Contains chlorite, biotite, muscovite, hornblende, and feldspar as accessory minerals. Occurs in Kings and Queens Counties, and southern Nassau County; similar deposits occur in buried valleys near north shore.	Moderately to highly permeable; contains mostly fresh water, but brackish water and water with high iron content locally in southeastern Nassau County and southern Queens County. Specific capacities of wells in the Jameco range from about 20 to 150 gpm per foot of drawdown.
Tertiary(?)	Pliocene(?)	Unconformity					
		Mannetto Gravel	(Commonly included with upper glacial aquifer.)	300	0-120	Gravel, fine to coarse, and lenses of sand; scattered clay lenses. Colors are white, yellow, and brown. Occurs only near Nassau-Suffolk County border near center of island.	Highly permeable, but occurs mostly above water table. Excellent infiltration characteristics.
Cretaceous		Unconformity					
		Magothy Formation	Magothy aquifer	1,100	0-600	Sand, fine to medium, clayey in part; interbedded with lenses and layers of coarse sand and sandy and solid clay. Gravel is common in basal 50-200 ft. Sand and gravel are quartzose. Lignite, pyrite, and iron oxide concretions are common; muscovite, magnetite, rutile, and garnet are accessory minerals. Colors are gray, white, red, brown, and yellow.	Most layers are poorly to moderately permeable; some are highly permeable locally. Specific capacities of wells in the Magothy generally range from 1 to about 30 gpm per foot of drawdown, rarely are as much as 80 gpm per ft. Water is unconfined in uppermost parts, elsewhere is confined. Water is generally of excellent quality but has high iron content locally along north and south shores. Constitutes principal aquifer for public-supply wells in western Long Island, except Kings County where it is mostly absent. Has been invaded by salty ground water locally in southwestern Nassau County and southern Queens County, and in small areas along north shore.

REFERENCE NO. 3

GOLD & WACHTEL

ROBERT GOLD*
WILLIAM B. WACHTEL
ELLIOT SILVERMAN

10 EAST 53RD STREET
NEW YORK, NEW YORK 10022

TELEPHONE: (212) 223-3311
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STEVEN J. COHEN
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NICOLETTA J. CAFERRI
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JACLYN A. FISCHLER
DAVID M. NIEBAUER

*ALSO MEMBER OF DISTRICT OF COLUMBIA BAR
*ALSO MEMBER OF MASSACHUSETTS BAR
*ALSO MEMBER OF NEW JERSEY BAR
*MEMBER OF FLORENCE (ITALY) BAR ONLY

HARRY H. WACHTEL
WALTER CASTORE*
OF COUNSEL

WASHINGTON OFFICE

SUITE 460
INTERNATIONAL SQUARE
1875 EYE STREET, N.W.
WASHINGTON, D.C. 20006
(202) 293-7100

EUROPEAN OFFICE

VIA G. LA PIRA, 21
FLORENCE, ITALY 50121
TEL. (055) 284147
TELEX 574306 INTLAW

June 10, 1987

NUS Corporation
1090 King George's Post Road
Suite 1103
Edison, New Jersey 08837

Attention: Joann L. Wagner

Re: Commercial Envelope Manufacturing Co., Inc.
("CEM") Proposed Site Investigation

Dear Ms. Wagner:

Thank you for your letter of April 24, 1987. I have subsequently received confirmation from the Environmental Protection Agency regarding the scope of your authority.

As we discussed, CEM has recently undergone a clean-up of its premises in accordance with a Consent Order entered into with the Suffolk County Department of Health Services ("SCDHS"), dated as of November 12, 1985. We discussed the possibility of NUS' study to be limited to a "non-sampling" site inspection if the documentation provided by CEM is current and satisfactory. In that regard, I am enclosing copies of the following:

(1) The April 10, 1986 letter from Geraghty & Miller, Inc., the ground water consultants retained by this firm, to James Maloney, P.E. of the SCDHS including the copies of the analytical results from samples collected from two monitoring wells installed on the premises;

(2) Analytical results, dted March 16, 1986, taken from the third monitoring well ("DP1"), installed off the premises as well as from one of the previously installed wells ("DP3"); and

(3) Appendix "A" to the Consent Order which gives you an idea of the location of the monitoring wells.

As you can see from the April 10 letter, Geraghty & Miller requested permission from the SCDHS to install the third monitoring well off site at an upgradient location in order to verify whether off-site activities were responsible for the existence of a volatile organic compound. Permission was granted by the SCDHS to install the third well. The following is an excerpt from Geraghty & Miller's report to us of its findings after review of the March 16, 1987 analytical results:

"Prior to collection of the February 27, 1987 samples [those reflected in March 16 results], six gallons of water were removed from each well to ensure that the samples were representative of water contained in the aquifer. The sample for metals was passed through a 0.45-micron filter prior to preservation. Analytical results for the samples are enclosed. For DP1, 2 ug/l of 1,1,1-trichloroethane and 5 ug/l of toluene were detected. For DP3, 11 ug/l of trichlorofluoromethane and 5 ug/l of tetrachloroethene were present. Although 1,2-dichloroethane was previously detected in DP3, none was present in the recent sample.

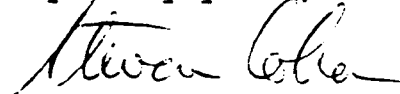
Given the low concentrations of VOCs (volatile organic compounds) present in the latest samples, the fact that such compounds (although different) exist at both upgradient and downgradient locations, and the likelihood that the two compounds found in DP3 are probably not attributable to site activities, we see no point in pursuing further investigation

NUS Corporation
June 10, 1987
Page 3

of the site. We will be glad to answer any questions either your or Mr. Maloney may have regarding this matter."

Should you need further information, please contact me.

Very truly yours,



Steven J. Cohen

SJC/hp

Encls.

cc (w/encls.): Mr. Ira B. Kristel



April 10, 1986

Mr. James C. Maloney, P.E.
Suffolk County Department of Health Services
15 Horseblock Place
Farmingville, New York 11738

Re: Commercial Envelope Manufacturing Co.
Project No. N0985GW1

Dear Mr. Maloney:

Enclosed are copies of the analytical results for samples collected from the two monitoring wells which have been installed on the subject property. Both wells are at downgradient locations; Well DP2 is just south of the loading dock area and Well DP3 is about 75 feet south and 50 feet east of the northeast corner of the new warehouse building. Each well is equipped with 10 feet of screen, set from 20 to 30 feet below grade at DP2 and 15 to 25 feet below grade at DP3. Static water levels were approximately 21 and 16 feet below grade, respectively.

A 5-foot length of casing is set below the screen in each well and serves as a sump. The wells are 2-inch diameter PVC. No glue was used to join casing and screen sections (stainless steel screws were used). Six gallons of water were bailed from each well prior to sampling. Samples for metals analysis were passed through a 0.45-micron filter prior to acidification. All samples were delivered to the laboratory shortly after collection.

Although elevated concentrations of iron were reported for samples from both wells, such an occurrence may be natural for the area. The absence of other metals indicates that the iron is probably not the result of waste disposal activities. Furthermore, the higher concentration was found at the more downgradient location.

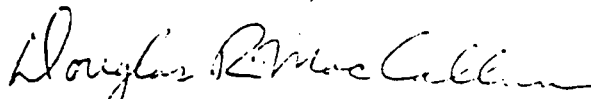
The opposite holds true for 1,2-dichloroethene as 610 ug/L were present in DP2 and 120 ug/L were detected in DP3. However, the lack of significant concentrations of other volatile organic compounds may preclude past site activities as being responsible for the presence of 1,2-dichloroethene. We, therefore, plan to install a third monitoring well at an upgradient location.

Because it may not be possible to establish the locations of underground utilities with absolute certainty and the fact that potential on-site drilling locations are in any event limited (overhead power lines), we would like to install the well just north of Grand Boulevard on County-owned land, such as the road right-of-way. Please let us know if this would be possible, and, if not, what would be an acceptable alternative.

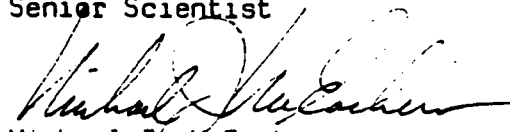
We look forward to hearing from you and appreciate your assistance in this matter.

Sincerely,

GERAGHTY & MILLER, INC.



Douglas R. MacCallum
Senior Scientist



Michael J. McEachern
Associate

DRM/MJM:vk
Encl.

cc: S. Cohen, Esq.

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777

LAB NO. 0860268/2

02/24/86

Geraghty & Miller
6800 Jericho Tpke.
Syosset, NY 11791

SOURCE OF SAMPLE: Well DP3

COLLECTED BY: client

DATE COL'D: 02/26/86 RECEIVED: 02/06/86

SAMPLE: water sample

ANALYTICAL PARAMETERS

Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlorodifluomethane	ug/L	<1
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<2
Trichlorofluomethane	ug/L	<2
11 Dichloroethene	ug/L	<2
11 Dichloroethane	ug/L	<2
12 Dichloroethene	ug/L	120 -
Chloroform	ug/L	<1
12 Dichloroethane	ug/L	<2
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
12 Dichloropropane	ug/L	<2
13 Dichloropropene	ug/L	<2
Trichloroethylene	ug/L	<1
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<2
13 Dichloropropene	ug/L	<2
2chloroethvinylether	ug/L	<2
Bromoform	ug/L	<2
1122Tetrachloroethan	ug/L	<2
Tetrachloroethene	ug/L	4

ANALYTICAL PARAMETERS

Chlorobenzene	ug/L	
13 Dichlorobenzene	ug/L	
12 Dichlorobenzene	ug/L	
14 Dichlorobenzene	ug/L	
Benzene	ug/L	
Toluene	ug/L	
Ethyl Benzene	ug/L	
Barium as Ba	mg/L	0.16
Cadmium as Cd	mg/L	0.001
Chromium as Cr	mg/L	0.003
Copper as Cu	mg/L	0.02
Iron as Fe	mg/L	12
Lead as Pb	mg/L	0.003
Nickel as Ni	mg/L	0.10
Silver as Ag	mg/L	0.001
Zinc as Zn	mg/L	0.15

cc:

REMARKS:

DIRECTOR

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777

LAB NO. C860268/1

02/24/86

Geraghty & Miller
6800 Jericho Turnpike,
Syosset, NY 11791

SOURCE OF SAMPLE: Well DP2

COLLECTED BY: client

DATE COL'D: 02/06/86 RECEIVED: 02/25/86

SAMPLE: water sample

ANALYTICAL PARAMETERS

Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlorodifluoromethane	ug/L	<1
Vinyl Chloride	ug/L	2
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<2
Trichlorofluoromethane	ug/L	<2
11 Dichloroethene	ug/L	<2
11 Dichloroethane	ug/L	<2
12 Dichloroethene	ug/L	610~
Chloroform	ug/L	<1
12 Dichloroethane	ug/L	<2
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
12 Dichloropropane	ug/L	<2
13 Dichloropropene	ug/L	<2
Trichloroethylene	ug/L	<1
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<2
13 Dichloropropene	ug/L	<2
2chloroethvinylether	ug/L	<2
Bromoform	ug/L	<2
1122Tetrachloroethan	ug/L	<2
Tetrachloroethene	ug/L	<1

ANALYTICAL PARAMETERS

Chlorobenzene	ug/L	<1
13 Dichlorobenzene	ug/L	<1
12 Dichlorobenzene	ug/L	<1
14 Dichlorobenzene	ug/L	<2
Benzene	ug/L	<1
Toluene	ug/L	<2
Ethyl Benzene	ug/L	<1

Barium as Ba	mg/L	0.14
Cadmium as Cd	mg/L	<0.001
Chromium as Cr	mg/L	<0.005
Copper as Cu	mg/L	<0.02
Iron as Fe	mg/L	4.3
Lead as Pb	mg/L	<0.005
Nickel as Ni	mg/L	<0.10
Silver as Ag	mg/L	<0.001
Zinc as Zn	mg/L	0.10

cc:

REMARKS:

DIRECTOR

Thomas R. Geraghty

377 SHEFFIELD AVE. S N. BABYLON, N.Y. 11703 (516) 422-3777

LAB NO. C870378/1

03/16/87

Geraghty & Miller, Inc.
125 East Bethpage Rd.
Plainview, NY 11803

ATTN: Andy Barber

SOURCE OF SAMPLE: Project #N0852WS1

COLLECTED BY: Client

DATE COL'D: 02/27/87 RECEIVED: 02/27/87

SAMPLE: Water sample, DP1

ANALYTICAL PARAMETERS

Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlorodifluomethane	ug/L	<1
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<2
Trichlorofluomethane	ug/L	<2
11 Dichloroethene	ug/L	<2
11 Dichloroethane	ug/L	<2
12 Dichloroethene	ug/L	<2
Chloroform	ug/L	<1
12 Dichloroethane	ug/L	<2
111 Trichloroethane	ug/L	2
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
12 Dichloropropane	ug/L	<2
t 13 Dichloropropene	ug/L	<2
Trichloroethylene	ug/L	<1
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<2
c 13 Dichloropropene	ug/L	<2
2chloroethvinylether	ug/L	<2
Bromoform	ug/L	<2
1122Tetrachloroethan	ug/L	<2
Tetrachloroethene	ug/L	<1

ANALYTICAL PARAMETERS

Chlorobenzene	ug/L	<1
13 Dichlorobenzene	ug/L	<2
12 Dichlorobenzene	ug/L	<2
14 Dichlorobenzene	ug/L	<2
Benzene	ug/L	<1
Toluene	ug/L	5 -
Ethyl Benzene	ug/L	<1
Barium as Ba	mg/L	0.10
Cadmium as Cd	mg/L	0.001
Chromium as Cr	mg/L	<0.02
Copper as Cu	mg/L	<0.02
Iron as Fe	mg/L	<0.05
Lead as Pb	mg/L	<0.005
Nickel as Ni	mg/L	<0.10
Silver as Ag	mg/L	<0.01
Zinc as Zn	mg/L	0.12

cc:

REMARKS:

DIRECTOR

Thomas R. Geraghty

LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. P.O. BOX 11700, N.Y. 11700 (516) 434-8777

LAB NO. C870378/2

03/16/87

Geraghty & Miller, Inc.
125 East Bethpage Rd.
Plainview, NY 11803

ATTN: Andy Barber

SOURCE OF SAMPLE: Project #N0852WS1

COLLECTED BY: Client

DATE COL'D: 02/27/87 RECEIVED: 02/27/87

SAMPLE: Water sample, DP3

ANALYTICAL PARAMETERS

Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlorodifluomethane	ug/L	<1
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<2
Trichlorofluomethane	ug/L	11
11 Dichloroethene	ug/L	<2
11 Dichloroethane	ug/L	<2
12 Dichloroethene	ug/L	<2
Chloroform	ug/L	<1
12 Dichloroethane	ug/L	<2
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
12 Dichloropropane	ug/L	<2
t 13 Dichloropropene	ug/L	<2
Trichloroethylene	ug/L	<1
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<2
c 13 Dichloropropene	ug/L	<2
2chloroethvinylether	ug/L	<2
Bromoform	ug/L	<2
1122Tetrachloroethan	ug/L	<2
Tetrachloroethene	ug/L	5-

ANALYTICAL PARAMETERS

Chlorobenzene	ug/L	<1
13 Dichlorobenzene	ug/L	<2
12 Dichlorobenzene	ug/L	<2
14 Dichlorobenzene	ug/L	<2
Benzene	ug/L	<1
Toluene	ug/L	<2
Ethyl Benzene	ug/L	<1

cc:

REMARKS:

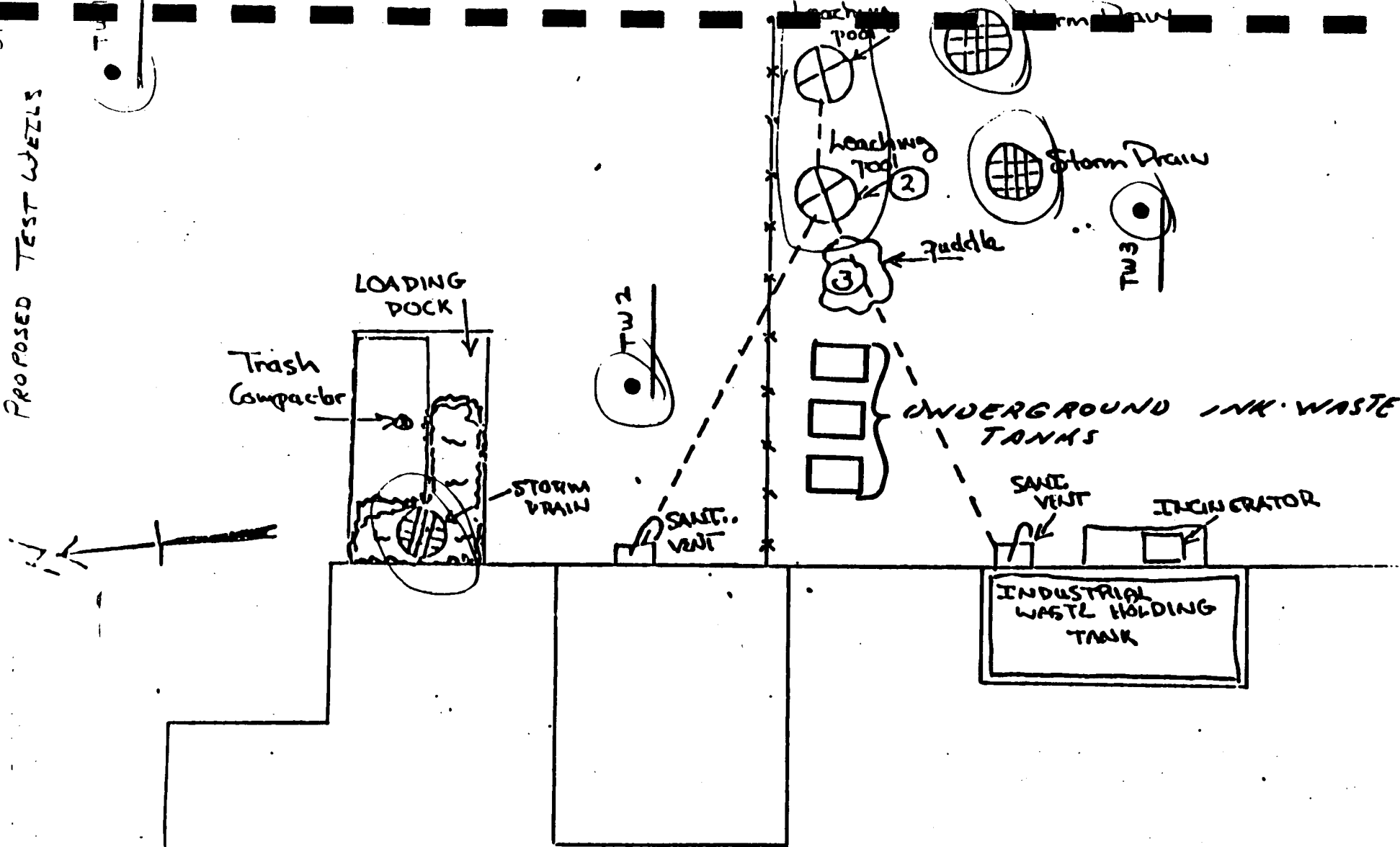
DIRECTOR

Thomas R. Geraghty

rn=

1259

APPROXIMATE LOCATIONS OF
PROPOSED TEST WELLS



Commercial Envelope Wtg. Co.
900 Grand Blvd. Deer Park, N.Y.

APPENDIX

A

PAGE 1 OF 1

ORDER ON CONSENT # _____

REFERENCE NO. 4

0028/F
02.8704.03

NUS CORPORATION

II

0101

Commercial Envelope Mfg. Co. Inc.
Deer Park, New York
TDD# 02-8704-03
Project Manager: E. Leonard
Logbook# 101
July 9, 1987

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COMMERCIAL ENVELOPES MFG (COM) 7/13/82 4

TDD 02-8704-03

ON-SITE EQUIPMENT



eder associates
consulting engineers, p. c.

Nicholas A. Andrianas
SENIOR PROJECT MANAGER

85 FOREST AVE. • LOCUST VALLEY, N. Y. 11560 • (516) 671-8440

CAMERA (SLIDE) 3

CAMERA (PRINTS) 4

MINI RAD 4

COMPASS

OVA-M

HNU-J

PH METER

SCBA'S - 192035 D. DOBRYN

- 192069 J. MURTAGH

464745

192709

0723 HRS

ARRIVE ON-SITE. WEST PARKING LOT.
GO TO RECEPTION
AREA TO FIND S. CONN SITE ROP

0726 HRS

S. CONN NOT ON-SITE YET.

0734 HRS

MEET WITH ^{ELL} B.W. WACHTOL (LAWYER)
S. CONN TO MEET US. MOVE
TO EAST PARKING LOT BY
WELLS.

0739 HRS

MEET S. CONN - SITE ROP (LAWYER)
N. ANDRIANAS - CONSULTANT
L. BRANNIGAN - PLANT MNGR.

0945 HRS

POSITION TRUCK & SET-UP
DOZON. S. MABURY CHALKING
IN AIR EQUIPMENT.

0955 HRS

NEW PERSONNEL ON SITE
E. LEONARD - PM
S. MABURY - SSO
P. DOHERTY - SMO

Ch Leonard 7/15/87

P. Doherty 7/21/87

CEM 7/13/87

TDD# 02-8704-03

5

D. DEBRUIN - SAMP

G. GILLILAND - SAMP

J. MURTAUGH - SAMP / DON

0953 HRS J. MURTAUGH + D. DEBRUIN
SUIT-UP FOR LEVEL-B RECON.

1004 HRS S. MAYBURY CONDUCTS TAILGATE
SAFETY MEETING

1011 HRS S. MAYBURY ENDS TAILGATE
SAFETY MEETING.

1015 HRS ALL SUITED-UP. AREA TOTALLY
PAVED, ~~WALLS~~ NO EXPOSED SOIL.
WELLS + LEACHING TANKS
PAVED OVER W/ ASPHALT. ~~THESE~~
WELLS AVAILABLE FOR SAMPLING.
WAREHOUSE BUILDING NOW
LEASED BY PEPSI-COLA CO.

1023 HRS. S. COMOV + A AND RAINES JOIN
US FOR LEVEL-B RECON.

1026 HRS DON ON AIR LEVEL-B STARTED
ON EAST SIDE OF WAREHOUSE

1029 HRS NO ROADINGS ABOVE BACKGROUND
ON OVA. ALONG EAST SIDE OF
WAREHOUSE

1034 HRS MAIN BUILDING NO ROADINGS ABOVE
BACKGROUND ON OVA (EAST SIDE).

C. Leonard 7/15/87

Galikerty 7/21/87

- 041 HRS } BARE AREA NEAR TRASH COMP
ON CAWN NO READINGS
ABOUT BACKGROUND ON OVA
PVC PIPE EXPOSED IN BARE AREA.
MAIN BUILDING
- 040 HRS } WEST
EAST SIDE OF WAREHOUSE. ALL
SOLVENT STORAGE SHED WOODS
HOUSE KEEPING. LUBRICATING OIL
EMPTY DRUMS, OUTSIDE. FULL DRUMS,
SOLVENTS IN SHED. MOST GLUES
WATER BASED. ALCOHOLS IN SHED
ON OVA
- 044 HRS NO READ ABOVE BACKGROUND AROUND
SOLVENT SHED. IN SOLVENT
SHED (ALCOHOLS) OVA - 2 PPM +
4 PPM ON HNU. BOTTOM OF
SHED FULL OF LIQUID.
- 045 HRS STAINED AREA SOUTH OF SHED.
NO READINGS ABOUT BACK GROUND
ON OVA HNU + OVA.
- 048 HRS SOUTH/WEST CORNER OF MAIN BUILDING
HOUSE NO READINGS ABOUT -
BACK GROUND ON OVA.
- 049 HRS DDC GOES OF DAN DURBIN
OFF AIR. BACK TO COMMAND
AREA.
- 056 HRS DAN, STONE + JOE BACK TO
AREA TO RST. ED + NICE ANDERSON
(CONSULTANT) COE FOR UPGRADE -
IDENT. W/ RLL.
- Ch Leonard 7/15/87
- Ex Osterberg
7/21/87

CEM 7/13/87
TDD # 02-8704-03

7

06 HRS S. CONNOR GOES TO ~~THE~~ ^{PHONE} ~~TO~~ ^{ELL}
CONTRACTOR TO FIND REACT
WELL LOCATION.

119 HRS S. CONNOR BACK ^{ELL} w BW, WACKER.
GEOLOGIST WHO ASST. IN INSTALLATION
OF WELL WILL BE BACK AT 1300 HRS.

29 HRS PREP TO MONITOR TWO DOWN GRADIENT
WELLS.

142 HRS
~~140 HRS~~
~~ELL~~

JOE MURTAUGH ON AIR TO
OPEN WELL TWZ + take air
+ WELL MEASUREMENTS.

145 HRS NO ROAD ON HWY, ABOVE
BACKGROUND. 480 ppm ON
OVA IN WELL.

22.2 FT

148 HRS ~~21 FT~~ ^{7 IN} ~~ELL~~ TO WATER LEVEL

150 HRS 34.2 FT TO BOTTOM

155 HRS J. MURTAUGH STARTS BAILING
WELL.

12 FEET OF WATER ^{COLUMN} ~~column~~ ^{ELL}
2.1 GAL / VOLUME.

206 HRS J. MURTAUGH OFF AIR.
D. DEBRION ON AIR.
D. DEBRION DUMPS ~ 4 GAL
WATER FROM ~~FOH~~ ^{TWZ} INTO
STORM DRAIN.

Cloward 7/15/87

ChDoherty 7/21/87

CEM 7/13/87
RDD# 02-8704-03

8

07 HRS DRAGOR TUBE SHOWS POSITIVE
FOR VINYL CHLORIDE. WATER VERY
SILTY.

1714 HRS PHOTO OF A. DOBRUJAN BAILING
WELL TW-2

216 HRS { J. MURTAUGH STARTS SAMPLING TW-2, ON AIR
D. DEBRUIN FINISHED BAILING
WELL OFF. REMOVED A 8 GALLON
OR JUST LESS THAN 4 VOLUMES.
DRUGGER READING OF VINYL CHLORIDE 2.5PPM
7-31 HRS PHOTO J. MURTAUGH SAMPLING
TW-2

4) NRS FINISHING SAMPLING TW-2

246 HRS J. MURTAUGH OFF AIR.

251 HES S. COHEN COMES OUT TO SEE
HOW WE WARE PROGRESS ON.
ASK FOR A LIST OF ALL
NUS PERSONNEL ON SITE.
I GAVE HIM A COPY
BACK TO S. COHEN

1304HCS - OWNER HAS BLVD ASSOC
- CONTAMINATED SOIL TO WEST
OF STORAGE TANKS. TO HCS
KNOWLEDGE NEVER REMOVED.
PREVIOUS OCCUPANT WILL
GET BACK.
S. CONDON LEFT SITE

Richard 7/15/87

D. L. Hartley 7/26/07

1010 HRS HEAD TO WELL TW-3.

1016 HRS D. DEBRUIN ON AIR.
+ OPENS WELL

1031 HRS NO READINGS ABOVE BACKGROUND
ON HNU.

1030 HRS NO READINGS ABOVE BACKGROUND
ON ~~HNU~~ OVA.

1032 HRS WATER LEVEL TW. 3 ^{16.0} ~~16.0~~ FEET
BOTTOM 30.0 FEET
WATER COLUMN 14.0 FT
2.4 GALLONS/VOL

1032 HRS WATER ^{RODDISH} ~~VERY~~ BROWN. N. ANDRIANAS
STATES PROBABLY DUE TO
HIGH IRON.

1039 HRS D. DEBRUIN BAILING WELL
TW-3.

1033 HRS J. MURTAUGH ON AIR. TAKING
DIAGNOSTIC TUBE READING.

1036 HRS D. DEBRUIN OFF AIR.

1038 HRS D. DEBRUIN ON AIR. +
BAILING WELL

CR Leonard 7/15/87

Choherty 7/14/87

1339 HRS. J. MURTAUGH OFF AIR.

1342 HRS 0.5 ppm VINYL CHLORIDE ON
DEGASSER TUBE, TW-3. (IN WALL).

1348 HRS { REMOVED ~ 10 GALLONS = ~ 4 VOLUMES.

1348 HRS { D. DEBRUIN FINISHES BAILING.

1351 HRS { J. MURTAUGH ON AIR.

1351 HRS { START SAMPLING WALL.

1353 HRS { OBTAINED PHOTO OF J. MURTAUGH SAMPLING WALL.

1353 HRS D. DEBRUIN OFF AIR.

1402 HRS AMBIENT READING ON DEGASSER
OF VINYL CHLORIDE IS 0.25 ppm.

1404 HRS FINISH SAMPLING TW-3.

1406 HRS J. MURTAUGH OFF AIR.

1411 HRS ALL BACK AT COMMAND AREA
TAKING BREAK.

1430 HRS BREAK OVER - J. MURTAUGH
SUITS-UP FOR SOIL
SAMPLES.

1448 HRS J. MURTAUGH SUITED-UP.
GO TO WEST SIDE OF
MAIN BUILDING TO TAKE
SOIL SAMPLES.

Chloride 7/15/87

Chloride
7/21/87

- 1453 HRS J MURTAUGH ON RESPIRATOR
TO OBTAIN SOIL SAMPLE
S-1.
- 1454 HRS J MURTAUGH STARTS OBTAINING
S-1 0-6 INCHES. NO READINGS
ABOUT BACK GROUND ON HNU.
- 1457 HRS OBTAIN PHOTO OF J. MURTAUGH
OBTAINING S-1. SOIL VERY
SANDY, LOOKS CLEAN.
- 1459 HRS FINISHING OBTAINING S-1.
- 1501 HRS START SAMPLING FOR S-2,
J. MURTAUGH.
- 1503 HRS 10 ppm ON HNU. J. MURTAUGH
BACKS OFF. S. MAYBURY BACK
TO COMMAND POST FOR SCBA.
10ppm READING IN HOLE NOT
IN OBTAINING AREA. J. MURTAUGH
OFF RESPIRATOR. NO READINGS ABOUT BACK
GROUND ON OVA
- 1505 HRS S MAYBURY BACK + J. MURTAUGH
PUTS ON SCBA.
- 1509 HRS J. MURTAUGH ON AIR. +
CONTINUOUS SAMPLING S-2.
- 1510 HRS OBTAIN PHOTO OF J. MURTAUGH
TAKING S-2. OVA READS
4PPM IN HOLE.
- 1512 HRS SOIL ^{ELL} ~~VERY DARK~~ SANDY WITH
DARK SPOTS. READINGS ON OVA
STABILIZATION
Chacon 7/15/87 Spohr 7/21/87

COM 7/13/87
TDD# 02-870403

12

ABOVE HOLE AT ~ 0.25 ppm, Depth
0-6 INCHES.

1515 HRS FINISHING SAMPLING. J. MURTAUGH
OFF AIR.

1519 HRS BACK AT COMMAND POST.
GO MEET N. ANDRIANAS TO
FIND WELL TW-1

1530 HRS FOUND WELL TW-1
ON NORTH SIDE OF
GRAND BLVD ~~TH~~ IN DRAINAGE
AREA OF ROAD, 20 FEET WEST
OF ~~THE~~ FIRE HYDRANT (SOUTH SIDE OF
ROAD).

1535 HRS D. DEBRUIN ON AIR.

1548 HRS WELL CAP LOCKED-ON.
D. DEBRUIN OFF AIR. N.
ANDRIANAS TO COM TO
GET BOLT CUTTERS.

1551 HRS N. ANDRIANAS COMES BACK,
MAINTANCE WILL BRING
OUT BOLT CUTTERS.

1610 HRS N. ANDRIANAS WENT TO
BUY ~~GET~~ A PAIR OF BOLT
CUTTERS.

1625 HRS WAITING FOR BOLT CUTTERS
S. MAY BURY + B. LEONARD TO

Chouard 7/15/87

Chouard
7/21/87

COM #02-87 7/13/87

TDI # 02-8704-03

13

AREA WHERE SOIL SAMPLES WERE
TO OBTAIN MEASUREMENTS.

1630 HRS S-1 6 FEET FROM
SOLVENT SHED 3 FEET
FROM BUILDING

S-2 2.6 FEET FROM
SOLVENT SHED. 7 FEET
FROM BUILDING.

1634 HRS BACK TO WELL. PLANT
MANAGER WITH A BOLT
CUTTER BEARS LOCK.

1636 HRS D. DEBRUIN ON AIR.

1637 HRS NO READINGS ABOVE BACKGROUND
ON OVA OR HNU.

1638 HRS TW-1 WATER LEVEL 19.5 FEET
BOTTOM 33.3 FEET
~~WATER COLUMN 13.8~~ ~~ELL~~

1640 HRS D. DEBRUIN STARTS BAILING
WELL.

13.8 FEET OF WATER COLUMN
2.4 GALLONS / VOL

1653 HRS PHOTO D. DEBRUIN BAILING
TW-1. WATER IS SILTY.

ER Leonard 7/15/87

EO Osherty

CEM 7/13/87
TDD # 02.8704.03

14

158 HRS. D. DEBRUIN FINISHED BAILING
REMOVED ~ 10 GALLONS ~ 24 VOLUME

1659 HRS D. DEBRUIN OFF AIR

1702 HRS D. DEBRUIN ON AIR NEW TANK.
STARTS SAMPLING TW-1
(NYS1 - GW3).

1704 HRS TAKE PHOTO OF D. DEBRUIN
SAMPLING

1709 HRS D. DEBRUIN FINISHES
SAMPLING

1711 ^{HRS} ~~HRS~~ D. DEBRUIN OFF AIR
RLL

1716 HRS PHOTO OF COM SIGN.

1718 HRS BACK TO COMMAND POST

1720 HRS SMO PACKING SAMPLES.
ALL OTHER PERSONNEL PACKING
UP EQUIPMENT.

1733 HRS CALL J. MAYO FROM COM MAIN BUILDING.
FINISH

1737 HRS ~~OFF~~ WITH J. MAYO BACK
TO COMMAND AREA.

1809 HRS LOAVE SITE
RLL

Command 7/13/87

G. Doherty
7/24/87

CEM 7/13/87

TDD# 02-8704.03

15

1823 ROD EX DROP OFF SAMPLES.

1830 HRS LEAVE ROD EX.

SITE NOTES

WEATHER:

- AM: HAZY + WARM. TEMP 75-80°F
STEADY WIND S/E AT ~ 5 MPH
- PM: OVERCAST, HOT + HUMID (HIGH) TEMP
85-90°F STEADY WIND S/E
5-10 MPH.

NON-NUS CORP. FOR SONNOR ON-SITE

WILLIAM WACHTER ~~Site~~ ^{Site} LAWYER: GOLD + WACHTER
STOVE CONDON - SITE REP/SITE LAWYER: GOLD + WACHTER

NICK ANDRIANAS - SITE CONSULTANT: FEDER ASSOC.

LEROY BRANNAGAN - PLANT MANAGER: COM

NO EXPOSED SOIL AROUND & SOUTH OF
LEACHING POOLS + UNDERGROUND TANKS. ENTIRE
AREA COVERED WITH ASPHALT + PRESENTLY A
PARKING LOT.

NO CONDUCTIVITY METER USED ON-SITE. A WORKING
METER WAS NOT AVAILABLE, COULD NOT CALIBRATE.

PH WORK

A ~~was~~ PH METER WAS NOT AVAILABLE. ON
7/10/87 PH METER (192709) WAS CALIBRATED.
ON 7/13/87 THIS METER WOULD NOT CALIBRATE,
READ -1.4 IN 7.0 PH BUFFER.

[Signature] 7/15/87

[Signature]
7/21/87

CEM 7/13/87
TDD 02-8704-03

16

- WATER FROM ALL THREE MONITORING WELLS
DEPOSITED IN STORM DRAIN NEAR POPSI GATE
(SEE MAP PG 37). ALL DRAIN WATER ALSO
DEPOSITED IN STORM DRAIN.

RECEIPT FOR SAMPLES WAS NOT OFFERED TO
SITE REP. SITE REP LEFT SITE BEFORE
SAMPLING FINISHED. SITE REP WAS S.
COHEN + LEFT ~ 1300 HRS.

- TW → TEST WELL

- SITE ACCESS. EAST AND WEST SIDES OF SITE
ARE FENCED. NORTH SIDE OF SITE, MAIN
ENTRANCE OFF OF GRAND BLVD., IS NOT
FENCED. SOUTH SIDE OF SITE IS FENCED,
EXCEPT FOR DRIVEWAY OFF OF BURT
DRIVE. NO FENCING AROUND SEVENTH
STORAGE SHED.

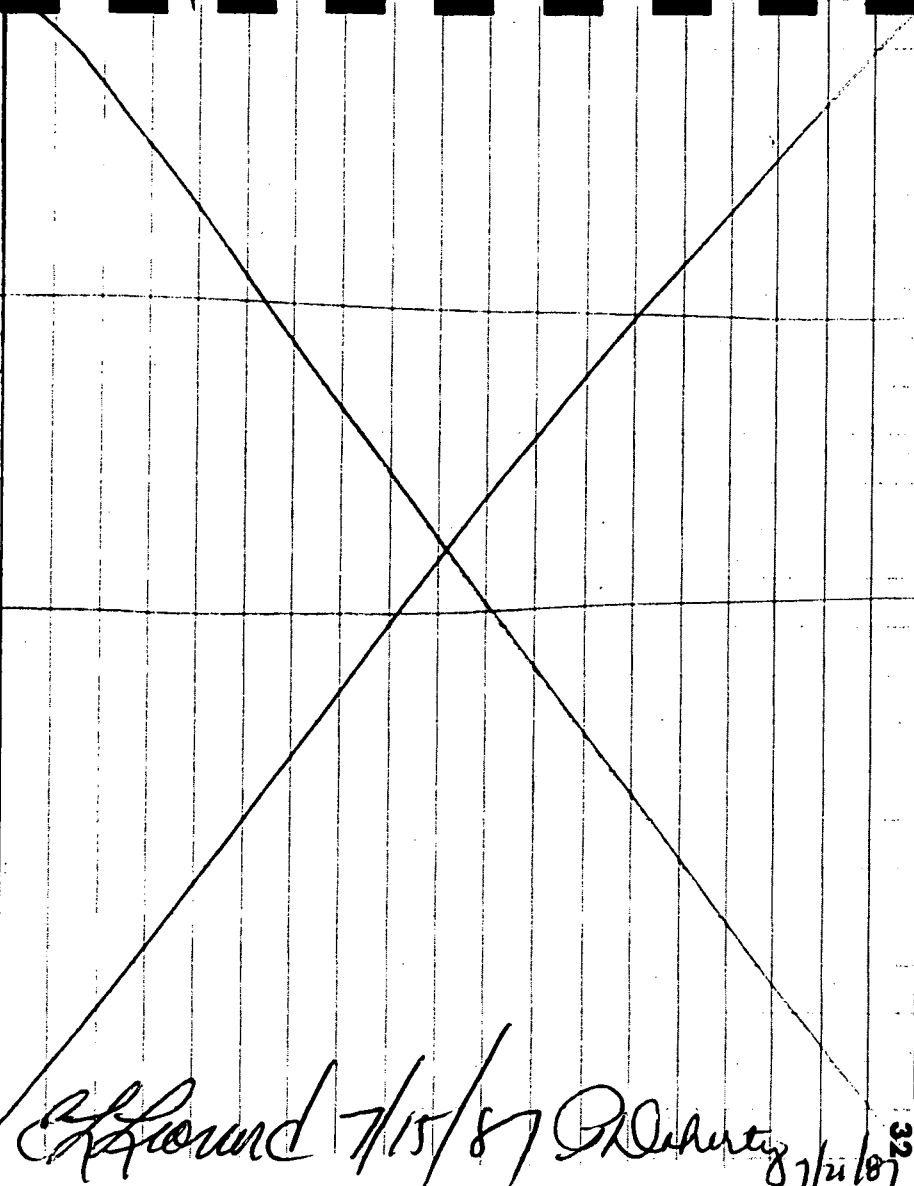
Chenard 7/15/87

Chenard

WELL	CONCENTRATIONS	LEVEL	DEPTH	AMOUNT	TIME
TW 2	480 ppm OVA 2.5 ppm VINYL CHLORIDE on DRUM OPPM HNU	22.2 FT	34.2 FT	2.1 GAL	~8 GAL

TW 3	OPPM OVA OPPM HNU 0.5 ppm VINYL CHLORIDE ON DRUM	14.0 FT	30.0 FT	2.4 GAL	~10 GAL
------	---	---------	---------	---------	---------

TW 1	OPPM OVA OPPM HNU NO DETECTOR READING OBTAINED	19.5 FT	33.3 FT	2.4 GAL	~10 GAL
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 Ground 7/15/87 Dr. [Signature] 8/12/87

MP#	MO#	DEPT TR#	MODEL TR#	SAMPLE TYPE/DESCRIPTION
NY\$1- GW1	10 1216 1351-1404 ^{RES}	BK399	MBK 468	GROUNDWATER FROM TW-2 ^{TW-3} LOCATED 30 FT SOUTH OF LOADING DOCK. WATER SILTY. (MS/MSD)
NY\$1- GW2	1216-1241 1351-1404 ^{RES}	BK 400	MBK 667	GROUNDWATER FROM TW-2 ^{TW-3} LOCATED 75 FT SOUTH AND 50 FT EAST OF THE N/E CORNER OF THE WAREHOUSE. WATER REDDISH BROWN IN COLOR. (ENV. DUP)
NY\$1- GW3	1702-1709 ^{RES}	BK501	MBK 568	GROUNDWATER FROM TW-1. LOCATED JUST OFF THE EDGE OF THE PAVEMENT ON THE NORTH SIDE OF GRAND BLVD N 20 FT WEST OF FIRE HYDRANT (ON SOUTH SIDE OF GRAND BLVD). WATER IS SILTY.
NY\$1- S1	1454-1459 ^{RES}	BK 376	MBK 899	SOIL. LOCATED 6 FT SOUTH OF SOLVENT BUILDING + 3 FT WEST OF BUILDING. (CLEAN) SANDY SOIL. (MS/MSD).
NY\$1- S2	1501-1515 ^{RES}	BK 378	MBK 295	SOIL. LOCATED 2.6 FT SOUTH OF SHED + 7 FEET WEST OF BUILDING. SANDY SOIL WITH DARK STRATIFICATIONS. 10ppm ON HANU (ENV. DUP).
NY\$1- TRBL1	N/A	BK 397	N/A	AQUEOUS TRIP BLANK - GROUNDWATER
NY\$1- TRBL2	N/A	BK 398	N/A	AQUEOUS TRIP BLANK - SOIL
NY\$1- GW1	1351-1404 ^{RES} <i>Chromat 7/15/87</i>	BK 399	MBK 468	GROUNDWATER FROM TW-3. LOCATED 75 FT SOUTH AND 50 FT EAST OF THE N/E CORNER OF THE WAREHOUSE. WATER REDDISH BROWN IN COLOR. (MS/MSD). <i>Orluty 7/21/87</i>

SAMP#	TIME	ORG TR#	INORG TR#	SAMPLE TYPE/DESCRIP
NY\$1- RIN1	N/A	BK394	MBJ 449	RINSTATE BLANK - BAILER
NY\$1- RIN2	N/A	BK395	450 MBJ 395 RH	RINSTATE BLANK - TROWEL
ORGANIC LAB:				Nanco Labs Inc. RD 6 ROBINSON LAKE WAPPINGER FALLS, NY 12590
INORGANIC LAB				Chemtech Consulting Group 360 W 11 ST NY NY 10014
NY\$1- GWZ	1216-1241 HRS	BK400	MBK567	GROUNDWATER FROM TW-2. LOCATED N 30 FOOT SOUTH OF LOADING DOCK. WATER SILTY. (ENV. DUP.)

AK/Board 7/15/87

Q. Roberts 7/21/87

DATE	TIME	PHOTO-GRAPHIC	ROLL/FR	DESCRIPTION
7/13/87	1214	ELL	SI-1 RI-1 PI-1	D. DEBRUIN BAILING WELL ELL TW-2
7/13/87	1231	ELL	SI-2 RI-2 PI-2	J. MURTAUGH COLLECTING SAMPLE NY\$1-GW2 AT TW-2.
7/13/87	1329	ELL	SI-3 SI-2 RI-3 PI-3	D. DEBRUIN BAILING WELL TW-3
7/13/87	1351	ELL	SI-4 RI-4 PI-4	J. MURTAUGH COLLECTING SAMPLE NY\$1-GW1 AT TW-3.
7/13/87	1457	ELL	SI-5	
7/13/87	1457	ELL	SI-5 RI-5 PI-5	J. MURTAUGH COLLECTING SAMPLE NY\$1-S1.
7/13/87	1510	ELL	SI-6 RI-6 PI-6	J. MURTAUGH COLLECTING SAMPLE NY\$1-S2.
7/13/87	1653	ELL	SI-7 RI-7 PI-7	D. DEBRUIN BAILING WELL TW-1
7/13/87	1704	ELL	SI-8 RI-8 PI-8	D. DEBRUIN OBTAINING SAMPLE NY\$1-GWB, AT TW-1.
Ch Leonard 7/15/87				
				Q. J. J. 7/21/87

7/13/87

1716

REH

31-9

PHOTO

OR

COM

SIGN

~~PI-9~~

PI-9 REH

Chenard 7/10/87

Robert 7/10/87



PRE-SAMPLE LOCATION MAP
COMMERCIAL ENVELOPE MFG. CO. INC., DEER PARK, N.Y.

REFERENCE NO. 5

Uncontrolled Hazardous Waste Site Ranking System

A Users Manual (HW-10)

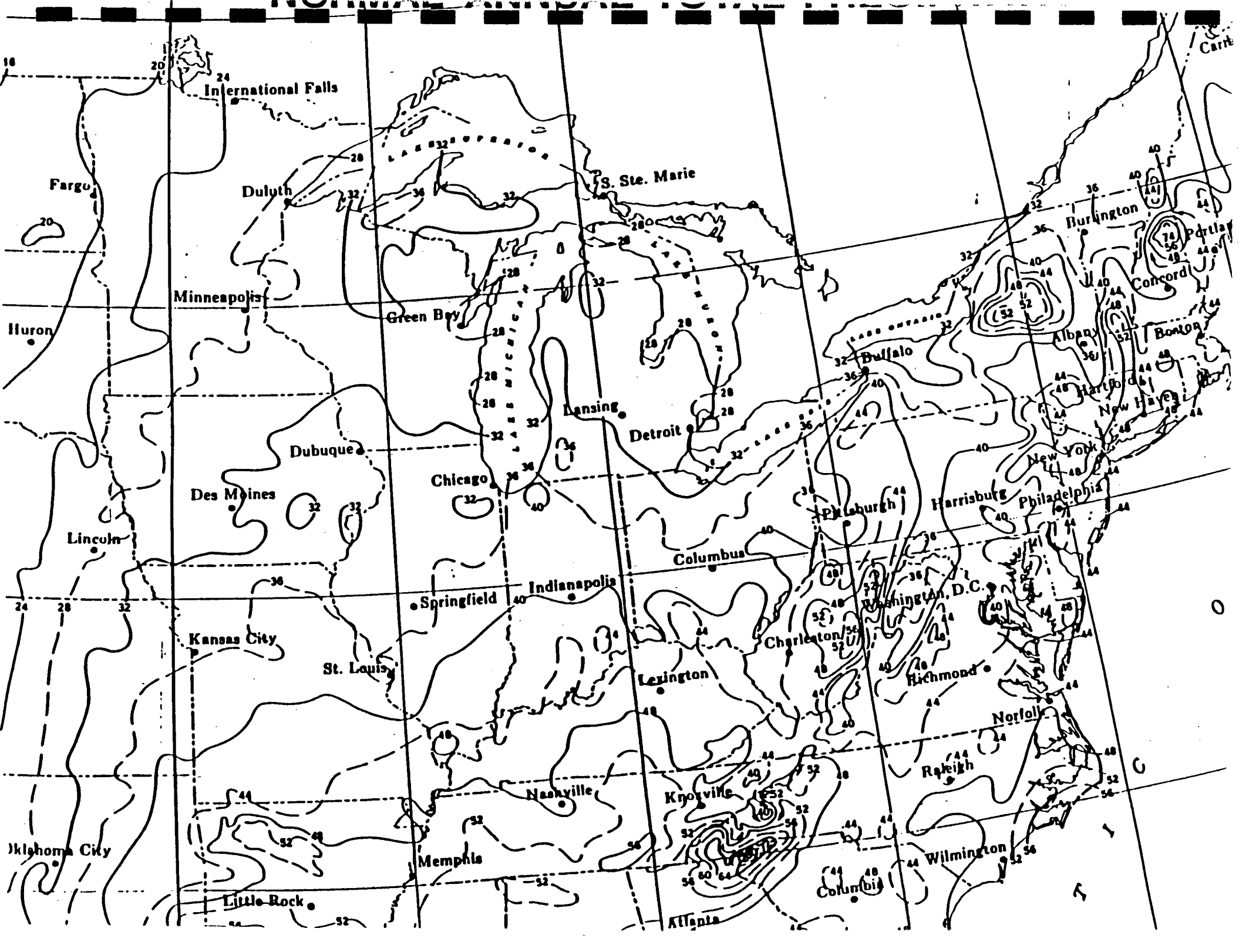
Originally Published in
the July 16, 1982, *Federal Register*

United States
Environmental Protection
Agency

1984

(In Inches)





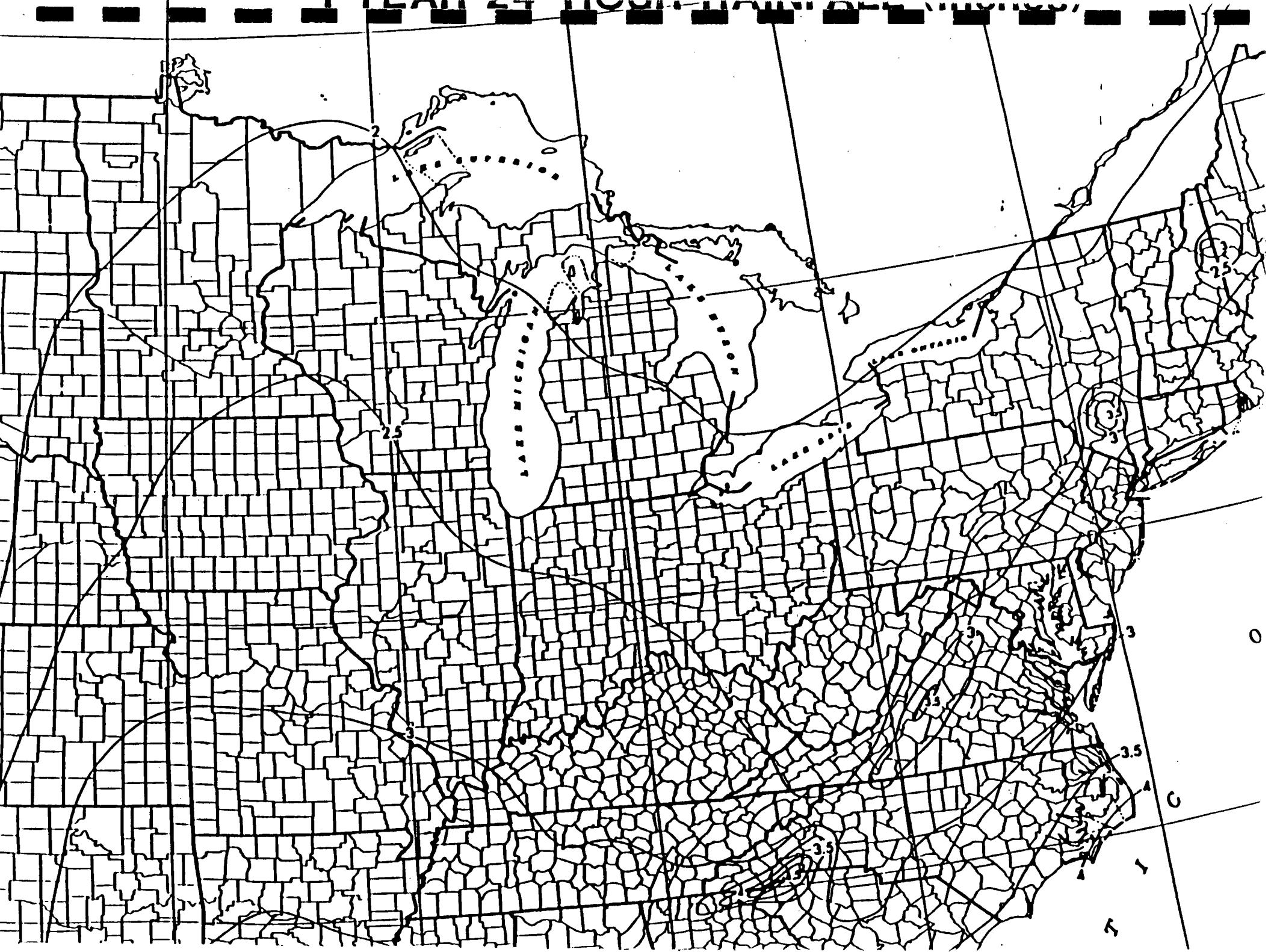


TABLE 2

PERMEABILITY OF GEOLOGIC MATERIALS*

Type of Material	Approximate Range of Hydraulic Conductivity	Assigned Value
Clay, compact till, shale; unfractured metamorphic and igneous rocks	$<10^{-7}$ cm/sec	0
Silt, loess, silty clays, silty loams, clay loams; less permeable limestone, dolomites, and sandstone; moderately permeable till	$10^{-5} - 10^{-7}$ cm/sec	1
Fine sand and silty sand; sandy loams; loamy sands; moderately permeable limestone, dolomites, and sandstone (no karst); moderately fractured igneous and metamorphic rocks, some coarse till	$10^{-3} - 10^{-5}$ cm/sec	2
Gravel, sand; highly fractured igneous and metamorphic rocks; permeable basalt and lavas; karst limestone and dolomite	$>10^{-3}$ cm/sec	3

*Derived from:

Davis, S. N., Porosity and Permeability of Natural Materials in Flow-Through Porous Media, R.J.M. DeWitt ed., Academic Press, New York, 1969

Freeze, R.A. and J.A. Cherry, Groundwater, Prentice-Hall, Inc., New York, 1979

REFERENCE NO. 6

COMMUNITY NAME ADDRESS CITY STATE ZIP		OWNER/ OFFICER CONTACT		TEL.	
Commercial Envelope, Mfg. Corp.		Irab Kristel Pres.		242-2500	
VILLAGE		TOWN			
Deer Park		Babylon			
900 Grand Blvd.					
DATE		TIME		ZIP	
5 JAN 81		3:50 PM			
ORIG. <input checked="" type="checkbox"/> COMPLAINT		PERIODIC <input type="checkbox"/> RE. <input type="checkbox"/>		WASTE <input type="checkbox"/> NO WASTE <input type="checkbox"/> H. & H. <input type="checkbox"/>	
INDUSTRIAL PROCESS:					
NEEDS PERMIT? YES. <input type="checkbox"/> NO. <input type="checkbox"/> PERMIT NO. _____					
360 PERMIT? YES. <input type="checkbox"/> NO. <input type="checkbox"/> PERMIT NO. _____					
RECORDS CONSISTENT WITH EXPECTED WASTE GENERATION. YES. <input type="checkbox"/> NO. <input type="checkbox"/>					
PICK UP RECORDS AVAILABLE. YES. <input type="checkbox"/> NO. <input type="checkbox"/>					
WASTE CAPACITY: WASTE MATERIALS. _____					
RAW MATERIALS. _____					
ON SITE: WASTE MATERIALS. _____					
RAW MATERIALS. _____					
FACILITIES: ENCLOSED <input type="checkbox"/> DIKED <input type="checkbox"/> CHEMICAL RESISTANT PAD <input type="checkbox"/> FLOOR DRAINS <input type="checkbox"/> STRUCTURALLY LEAK TIGHT <input type="checkbox"/>					

PROCESS	DISCHARGE	DISCHARGED TO	DISCHARGE POINT
<p>Large purple spill to East of NE end of Blvd. Observed 2-3" galvanized pipe thru road fence on East side of Blvd. Numerous 55 gal. drums stored on site in fenced in lot.</p> <p>20015-1 depth 3" fence</p> <p>39 ps. 50 (100) ps.</p> <p>Water based ink, normally held in tank,</p>			

removed sample 1 to 151 → Large purple spill to East of parking lot, NE of pipe. Pool approx. 72' x 40' - Land spill is on is not owned by Comm. Envelope. Is Mr. Kristel.

VIOLATIONS FORM

THE FACILITY OPERATOR:

GROUNDWATER IS SUSPECTED OF BEING CONTAMINATED BY INDUSTRIAL WASTE DISCHARGED ON TO THE GROUND OR INTO STORM DRAINS. THIS VIOLATION IS SUBJECT TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC) AND THE NEW YORK STATE DEPARTMENT OF HEALTH (DOH). VIOLATION OF SURFACE AND GROUND WATERS IN SUFFOLK COUNTY FROM INDUSTRIAL POLLUTION IS PROVIDED FOR BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION LAW, THE SUFFOLK COUNTY SANITARY CODE, AND THE NEW YORK STATE NAVIGATION LAW.

PLEASE NOTE THE ITEMS LISTED BELOW ARE VIOLATIONS, OF ONE OR MORE OF THE ABOVE CODES OF LAWS, WHICH WERE FOUND ON THIS DATE AT YOUR FACILITY. SINCE THESE VIOLATIONS MAY RESULT IN LEGAL ACTION IT IS IMPERATIVE THAT IMMEDIATE CORRECTIVE ACTION BE TAKEN BY YOUR FACILITY.

SECTION	NO.	ITEM	DATE CORRECTED
PERMITS	1.	DISCHARGING INDUSTRIAL WASTE WITHOUT A VALID STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) PERMIT. (CORRECTIVE ACTION - "A" OR "B") (A) CEASE ALL DISCHARGE. INITIATE A CLOSED LOOP SYSTEM OF OPERATION AT YOUR FACILITY. ANY WASTE GENERATED TO BE HELD AND HAULED BY A LICENSED INDUSTRIAL WASTE SCAVENGER. OBTAIN AN INDUSTRIAL WASTE HOLDING PERMIT. (B) IF YOU WISH TO MAINTAIN AN INDUSTRIAL DISCHARGE: 1. THE DISCHARGE MUST BE TREATED IF NECESSARY TO MEET N.Y. STATE EFFLUENT STANDARDS. 2. APPLY FOR AND OBTAIN A SPDES PERMIT. ALL FOUR COPIES OF PERMIT APPLICATION TO BE FILLED OUT AND SUBMITTED WITHIN 30 DAYS. ALSO INCLUDE A PLOT PLAN SHOWING ALL PLANT DISCHARGES AND POINTS TO WHERE ALL DISCHARGES ARE POUTED. (CHESPOOLS, STORM DRAINS, ETC.)	
	2.	STORING OR HOLDING INDUSTRIAL WASTE WITHOUT A VALID INDUSTRIAL WASTE STORAGE PERMIT. (CORRECTIVE ACTION - APPLY FOR AND OBTAIN AN INDUSTRIAL WASTE STORAGE PERMIT.)	
STZ SPSAL	3.	RELEASING TOXIC OR HAZARDOUS WASTES TO ANYONE OTHER THAN A LICENSED INDUSTRIAL WASTE SCAVENGER. (CORRECTIVE ACTION - OBTAIN THE SERVICES OF A LICENSED INDUSTRIAL WASTE SCAVENGER AND NOTIFY THIS DEPARTMENT, IN WRITING, WITHIN 14 DAYS OF SCAVENGER SELECTED.)	
	4.	PICKING UP, TRANSPORTING, OR DISPOSING OF TOXIC OR HAZARDOUS WASTE WITHOUT A VALID N.Y. STATE INDUSTRIAL WASTE COLLECTOR REGISTRATION.	
	5.	SCAVENGER PICK UP RECEIPTS NOT AVAILABLE AT TIME OF INSPECTION. (CORRECTIVE ACTION - SCAVENGER PICK UP RECEIPTS LISTING VOLUME, TYPE OF MATERIAL PICKED UP, AND DATE OF PICK UP MUST BE KEPT ON THE PREMISES AND MADE AVAILABLE TO REPRESENTATIVES OF THIS DEPARTMENT UPON REQUEST.)	
ILLS	6.	FAILURE TO REPORT A TOXIC OR HAZARDOUS MATERIAL SPILL WITHIN 2 HOURS OF SPILL DETECTION. (ANY UNAUTHORIZED DISCHARGE, SPILL OR RECOGNIZABLE LOSS OF TOXIC OR HAZARDOUS WASTE SHALL BE REPORTED TO THE SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES, AND ANY OTHER REQUIRED AGENCY, WITHIN 2 HOURS OF SPILL DETECTION.)	
HAZARDOUS MATERIALS	7.	STORAGE: DRUMS, _____ TANKE, _____ CONTAINERS, USED FOR THE STORAGE OR HANDLING OF TOXIC OR HAZARDOUS WASTE FOUND: (A) NOT STORED IN A WAY THAT WILL PREVENT THE RELEASE OF THE CONTENTS OF THE CONTAINERS TO THE GROUND OR SURFACE WATERS. (B) NOT STORED INDOORS. (NOTE- IF INDOOR STORAGE IS PROHIBITED BY PERTINENT FIRE REGULATIONS THEN SUCH PROHIBITION SHOULD BE SUBMITTED TO THIS DEPARTMENT, IN WRITING, SIGNED BY THE LOCAL FIRE COMMISSIONER.) (C) NOT STORED ON AN IMPERVIOUS, CHEMICAL RESISTANT SURFACE COMPATIBLE WITH THE MATERIAL BEING STORED. (D) STORAGE AREA NOT COMPLETELY ENCLOSED WITH A PERMANENT DIKE OF IMPERMEABLE CONSTRUCTION, AND CAPABLE OF PROVIDING A SPILL CONTAINMENT CAPACITY OF 110% OF THE VOLUME OF STORED MATERIAL. (E) NOT STORED PROTECTED FROM VANDALISM, UNAUTHORIZED ACCESS AND / OR RUSTING, FREEZING, AND OTHER WEATHER RELATED DAMAGE.	

For Industrial Waste Scavengers hnd.
call Tony D. Cosfanya. 251-7900

- ① Clean up spill, using licensed industrial waste scavengers
- ② Will return on Aug-16 Jan 81 to make full inspection of plant 930AM

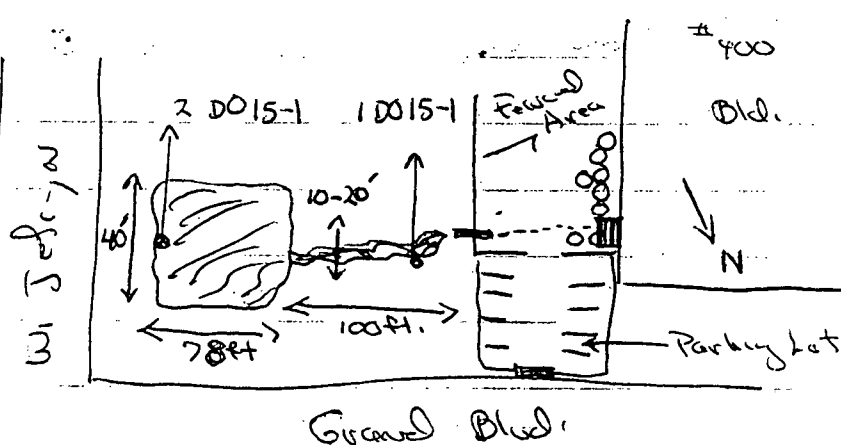
NOTED BY THIS FACILITY TO THE SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES TO CONDUCT ROUTINE SAMPLING OF STORM DRAINS, AND OTHER DISCHARGE POINTS AT THE FACILITY ? YES. NO.

DATE OF OR AFTER
GARY / OR FINE

FAILURE TO CORRECT UNSATISFACTORY CONDITIONS BY REINSPECTION DATE

DAVID CBRIS

(2)



① Light to dark purple color liquids.

A) Sample 1 DO 15-1, dug thru ice and dirt to form depression to take sample. Liquid almost black/very dark purple. Liquid granular.

B) Sample 2 DO 15-1, light pink, liquid, depth 3".

② Pipe stuck thru fence at ground level, deep cut in bark from flow, 8-12".

Pipe now galvanized, fence appears now also.

c) Trench in snow from pipe to building, appears roundish, possible hose connected to pipe for discharge purposes.

③ Numerous SS gal. drums, gray-green stained in fenced area. from 15-30 approx.

④ Est. gallons $40' \times 78' \times 1.25' = 5835 \text{ gal.}$ or $40' \times 78' \times 1" = 1937 \text{ gal.}$
Drobing.

⑥ 16 Jan, 1980 → Took 6 p.m. approx 928-3900.

Jan. 25, 85

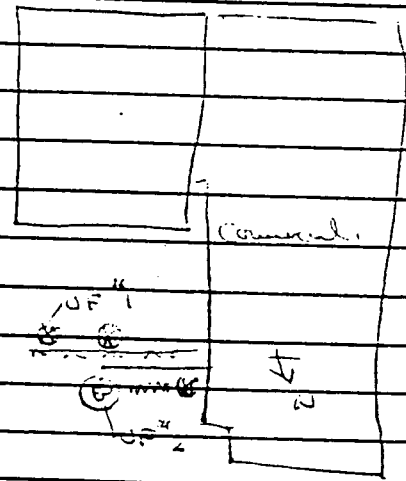
Commercial Envelope Wk. Corp.
Grand Blvd. Dept. Park NY.

① Loading dock over flow pumped down to sludge

② Overflow pool from ink wash pot wash machine pumped down to sludge.

Total of 2200 gall removed from both pools by
C.R.

③ Sludge in ink pot wash discharge pool system was examined no obvious contamination. Sludge very thin not colored. Pool will be filled in with
sand.



④ Loading dock storm drain over flow pool cement cap has been removed + pool widened + exposed. There are two 4-6" white pipes entering pool side by side from the direction (West) of the visible loading dock storm drain.

There is sludge at the bottom of the pool which will be removed.

There are no other apparent over-flow pipes from the excavated over-flow pool. The pool is a typical leaching pool, approx. 15-25 ft. deep.

⑤ The garbage in the dumpster still contains ink soaked rags + some empty ink cans, discolored water (pink) is standing in the loading dock.

David O.

NAME OF COMPANY Commercial Envelope Mfg. Co.		OWNER/OFFICER Mr. Knistel Pres.	
CONTACT Mr. Knistel		TEL.	
VILLAGE Deer Park		TOWN Bab.	
ADDRESS Grand Blvd.		ZIP	
DATE 22 Feb 81	TIME 1100	ORIG. _____ PERIODIC _____ RE. <input checked="" type="checkbox"/>	WASTE _____ NO WASTE _____ H.S.H. <input checked="" type="checkbox"/>
INDUSTRIAL PROCESS: Manuf. Envelopes			
DOES THIS FACILITY HAVE A PERMIT? YES. _____ NO. PERMIT NO. _____		360 PERMIT? YES. _____ NO. PERMIT NO. _____	
AVENGER			
AVENGER PROVIDED. YES. _____ NO. _____		PICK UP RECORDS AVAILABLE. YES. _____ NO. _____	
RECORDS CONSISTENT WITH EXPECTED WASTE GENERATION. YES. _____ NO. _____		TEL.	
STORAGE CAPACITY: WASTE MATERIALS.		RAW MATERIALS.	
VOLUME ON SITE: WASTE MATERIALS.		RAW MATERIALS.	

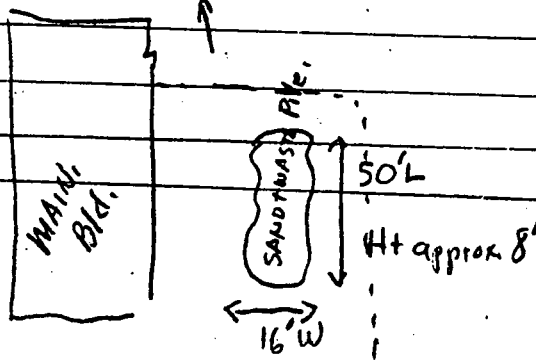
DISCHARGE FACILITIES: ENCLOSED ____ DIKED ____ CHEMICAL RESISTANT PAD ____ FLOOR DRAINS ____ STRUCTURALLY LEAK TIGHT ____

PROCESS	DISCHARGE	DISCHARGED TO	DISCHARGE POINT
Clean up done by XXXXX Art Weiner - Earth Moving.			
Mr. Knistel SAYS went down approx 3' ft., and removed dirt.			
Mr. Knistel			

Notified Mr. Knistel that the removed dirt is considered a hazardous material and that it will be Embargoed. Tag No. 790

dirt stored on East side of the outside, on black top surface, observed storm drains.

observed some run off evidence on recent rain, however water apparently evaporated.



THE FACILITY OPERATOR:

GROUNDWATER IS SUFFOLK COUNTY'S SOLE SUPPLY SOURCE FOR DRINKING WATER. INDUSTRIAL WASTES DISCHARGED ON TO THE GROUND OR IN CESSPOOLS OR STORM DRAINS MAY RENDER THIS VALUABLE RESOURCE UNFIT FOR HUMAN CONSUMPTION WITH SOLVENTS, OILS, AND OTHER TOXIC AND HAZARDOUS MATERIALS. PROTECTION OF SURFACE AND GROUNDWATERS IN SUFFOLK COUNTY FROM INDUSTRIAL POLLUTION IS PROVIDED FOR BY THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW, THE SUFFOLK COUNTY SANITARY CODE, AND THE NEW YORK STATE NAVIGATION LAW.

PLEASE NOTE, THE ITEMS CHECKED BELOW ARE VIOLATIONS, OF ONE OR MORE OF THE ABOVE CODES OR LAWS, WHICH WERE FOUND ON THIS DATE AT YOUR FACILITY. SINCE THESE VIOLATIONS MAY RESULT IN LEGAL ACTION IT IS IMPERATIVE THAT IMMEDIATE CORRECTIVE ACTION BE INITIATED BY YOUR FACILITY.

ACTION VIO.	ITEM	DATE CORRECTED
PERMITS	1. DISCHARGING INDUSTRIAL WASTE WITHOUT A VALID STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) PERMIT. (CORRECTIVE ACTION - "A" OR "B") (A) CEASE ALL DISCHARGE. INITIATE A CLOSED LOOP SYSTEM OF OPERATION AT YOUR FACILITY. ANY WASTE GENERATED TO BE HELD AND HAULED BY A LICENSED INDUSTRIAL WASTE SCAVENGER. OBTAIN AN INDUSTRIAL WASTE HOLDING PERMIT. (B) IF YOU WISH TO MAINTAIN AN INDUSTRIAL DISCHARGE: 1. THE DISCHARGE MUST BE TREATED IF NECESSARY TO MEET N.Y. STATE EFFLUENT STANDARDS. 2. APPLY FOR AND OBTAIN A SPDES PERMIT. ALL FOUR COPIES OF PERMIT APPLICATION TO BE FILLED OUT AND SUBMITTED WITHIN 30 DAYS. ALSO INCLUDE A PLOT PLAN SHOWING ALL PLANT DISCHARGES AND POINTS TO WHERE ALL DISCHARGES ARE ROUTED. (CESSPOOLS, STORM DRAINS, ETC.)	
	2. STORING OR HOLDING INDUSTRIAL WASTE WITHOUT A VALID INDUSTRIAL WASTE STORAGE PERMIT. (CORRECTIVE ACTION - APPLY FOR AND OBTAIN AN INDUSTRIAL WASTE STORAGE PERMIT.)	
WASTE DISPOSAL	3. RELEASING TOXIC OR HAZARDOUS WASTES TO ANYONE OTHER THAN A LICENSED INDUSTRIAL WASTE SCAVENGER. (CORRECTIVE ACTION - OBTAIN THE SERVICES OF A LICENSED INDUSTRIAL WASTE SCAVENGER AND NOTIFY THIS DEPARTMENT, IN WRITING, WITHIN 14 DAYS OF SCAVENGER SELECTED.)	
	4. PICKING UP, TRANSPORTING, OR DISPOSING OF TOXIC OR HAZARDOUS WASTE WITHOUT A VALID N.Y. STATE INDUSTRIAL WASTE COLLECTOR REGISTRATION.	
SPILLS	5. SCAVENGER PICK UP RECEIPTS NOT AVAILABLE AT TIME OF INSPECTION. (CORRECTIVE ACTION - SCAVENGER PICK UP RECEIPTS LISTING VOLUME, TYPE OF MATERIAL PICKED UP, AND DATE OF PICK UP MUST BE KEPT ON THE PREMISES AND MADE AVAILABLE TO REPRESENTATIVES OF THIS DEPARTMENT UPON REQUEST.)	
	6. FAILURE TO REPORT A TOXIC OR HAZARDOUS MATERIAL SPILL WITHIN 2 HOURS OF SPILL DETECTION. (ANY UNAUTHORIZED DISCHARGE, SPILL OR RECOGNIZABLE LOSS OF TOXIC OR HAZARDOUS WASTE SHALL BE REPORTED TO THE SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES, AND ANY OTHER REQUIRED AGENCY, WITHIN 2 HOURS OF SPILL DETECTION.)	
HAZARDOUS MATERIALS STORAGE	7. STORAGE: DRUMS, TANKS, CONTAINERS, USED FOR THE STORAGE OR HANDLING OF TOXIC OR HAZARDOUS WASTE FOUND:	
	(A) NOT STORED IN A WAY THAT WILL PREVENT THE RELEASE OF THE CONTENTS OF THE CONTAINERS TO THE GROUND OR SURFACE WATERS.	
	(B) NOT STORED INDOORS. (NOTE - IF INDOOR STORAGE IS PROHIBITED BY PERTINENT FIRE REGULATIONS THEN SUCH PROHIBITION SHOULD BE SUBMITTED TO THIS DEPARTMENT, IN WRITING, SIGNED BY THE LOCAL FIRE COMMISSIONER.)	
	(C) NOT STORED ON AN IMPERVIOUS, CHEMICAL RESISTANT SURFACE COMPATIBLE WITH THE MATERIAL BEING STORED.	
	(D) STORAGE AREA NOT COMPLETELY ENCLOSED WITH A PERMANENT DIKE OF IMPERMEABLE CONSTRUCTION, AND CAPABLE OF PROVIDING A SPILL CONTAINMENT CAPACITY OF 110% OF THE VOLUME OF STORED MATERIAL.	
	(E) NOT STORED PROTECTED FROM VANDALISM, UNAUTHORIZED ACCESS AND / OR RUSTING, FREEZING, AND OTHER WEATHER RELATED DAMAGE.	
Consultant. Pri. Palevsky - 516-775-3408		
At Santo Domingo call consultants.		
Comm. Envelope. wants to use sand in cement mix in construction of new bldg on premises, at Grand Blvd Deer Park.		
THIS COMMODITY NOT TO BE REMOVED OR USED UNTIL AUTHORIZED BY THE SUFFOLK COUNTY DEPT OF HEALTH SERVICES.		
CALL JACK ENZEBERG		
DAVID OBRIEN 516.234-2622		

IS PERMISSION GRANTED BY THIS FACILITY TO THE SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES TO CONDUCT ROUTINE SAMPLING OF CESSPOOLS, STORMDRAINS, AND OTHER DISCHARGE POINTS AT THE FACILITY? YES. NO.

INSPECTION SCHEDULED ON OR AFTER _____ FAILURE TO CORRECT UNSATISFACTORY CONDITIONS BY REINSPECTION DATE _____

NAME OF PERSON GIVING REPORT Abi Kushtel - Ins TITLE 2/27/81 INSPECTOR DAVID OBRIEN

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
INDUSTRIAL WASTE AND HAZARDOUS MATERIALS CONTROL
15 HORSEBLOCK PLACE, FARMINGVILLE, N.Y. 11738
(516) 451-4633

NAME OF FACILITY		OWNER/OFFICER	PAGE <u>1</u> OF <u>1</u>
COMPANY NAME		CONTACT	
ADDRESS		VILLAGE	TOWN
MAILING ADDRESS		ZIP	
DATE	TIME	ORIG. PERIODIC	WASTE NO WASTE H&H SEWAGE SYSTEM PUBLIC PRIVATE

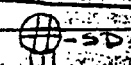
-1- Pumping + washing storm drain in loading dock. Pool approx. 20ft. deep.

-2- CPC removed initial liquid/sludge from loading dock storm drain, on Thursday, Jan. 10, 1985. CPC removed 3400 gal. IE. waste NY# 12425-3.

-3- Excavation over weekend. Trench over flow (2nd pool) to the East of loading dock storm drain. The cover has been partially broken open; observations + sampling revealed a pool approx. 20ft. deep with approx. 2-3ft. of purple colored liquid; there is also a undetermined amount of blue/black sludge. A sample of the liquid was procured for H&H to test for lead.

A third pipe which was in the storm drain was traced to the pipe observed in the trench + crossing the trench at a ~~45° angle~~ 45°. I blew water up the pipe using CPS pressure washer the water came out the pipe as it crossed the trench. The pipe crossed the trench approx. 12-14" higher than the two other excavated pipes. Running a wire up the pipe on the South side of the trench revealed that the material inside the pipe was wet the same as the sludge in the other two lower pipes. In discussions with Mr. Joe J. Hall, it was decided not to excavate + trace this 3rd pipe.

Commercial Sludge



7

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
INDUSTRIAL WASTE AND HAZARDOUS MATERIALS CONTROL
15 HORSEBLOCK PLACE, FARMINGVILLE, N.Y. 11738
(516) 451-4633

File
0/5

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NAME OF FACILITY <u>Commercial Envelope Mfg. Corp.</u>		OWNER/OFFICER <u>Mr. Ira Krastel</u>	PAGE <u>1</u> OF <u>1</u>
COMPANY NAME		CONTACT	TEL.
PLANT ADDRESS	VILLAGE <u>Deer Park</u>	TOWN <u>Bab. Ny</u>	ZIP
MAILING ADDRESS <u>900 Grand Blvd.</u>			
DATE <u>July 9, 85</u>	TIME <u>6:00 AM</u>	ORIG. PERIODIC <input checked="" type="radio"/> RE <input type="radio"/>	WASTE <input checked="" type="radio"/> NO WASTE <input type="radio"/> H&H <input type="radio"/>
SEWAGE SYSTEM			PUBLIC <input type="radio"/> PRIVATE <input checked="" type="radio"/>

Search Warrant Investigation

Personnel of the DA's Special Investigation - Environmental Crimes Unit, i.e. Investigator Stephen Pruckack, + Investigator John Flynn, presented a Warrant for a search at Commercial Envelope Mfg Corp., located at 900 Grand Blvd. Deer Park, NY. The search was to locate and eye test particular pipes from the inside of Commercial Envelope, that emanated from the "photo rooms" area and a "ink pot" wash machine. These pipes ~~led~~ under the floor or ground outside Commercial to the East and ~~dis~~ had discharged into a series of two leaching pools. The search also was to conduct sampling of any "leakage" inside those pipes, and liquid from the "ink pot" wash machine, a small collection sump inside the photo rooms, and a "wet" area beneath a loading dock compactor. ~~Thus~~ The Environmental Crimes Unit was assisted by an additional four investigators, they were to lead a hand excavating the pipes and pools. The additional investigators also shot 35mm prints of the search, and video taped the sampling.

The identification of particular points to be excavated or sampled was facilitated by personnel from the Inspectional Services Section, of the Bureau of Environmental Health i.e. Ms. JoAnn Johnson + Mr David Obyr ~~and Mr. [unclear]~~. All samples were to be taken by ~~the [unclear]~~ This identification was ~~made~~ made possible by the more than thirty inspection/sampling conducted by Ms Johnson + Mr Obyr at Commercial Envelope prior to the one being forwarded to the DA.

②
July 9, 85

The ~~same~~ Health Dept. sampling team was Mr. Eric Youngblood, Mr. David Obry ~~in Mr. Johnson~~, assisted by Mr. Johnson. Full protective gear was utilized i.e. white hooded protective coveralls, boots, double gloves, SCBA, + ~~two~~ two way communication, + LEL/O₂ meters, + lifeline.

The search for the pipes to dye test involved excavation and exposure of ~~two lines~~ two systems discharging into one leaching pool. The line from the "photo rooms" was intercepted as it exited from a cement filled sanitary vent, an area which is opposite the "photo rooms" on the East outside wall of Commercial. A shallow trench was excavated approx. 3-ft. wide, 3-ft. deep + 4-5 ft. long, this exposed the gray/white composite pipe. Members of the Suffolk County Police-Emergency Services Unit, drilled and chiseled a hole ~~in~~ by enough to obtain a sludge sample + to dye test the line.

The pipe from the "ink pot" wash machine, had been previously, exposed, cut + plugged inside the printing area. This portion of the pipe was re excavated, ~~the~~ the site was a 4-ft wide x 4-ft long by 4-5 ft deep square hole.

These two pipes ~~which~~ had previously discharged into ~~a~~ two leaching pools in line, both pools had been ~~ordered~~ pumped + filled in by the SCDHS. The first pool in line with some help from the Babylon Town Highway Dept., was broken open with a jack hammer, and the cement fill previously applied was removed. The leaching pool was excavated down to the 2 discharge pipes, at a dept of approx. 6-7 ft. below grade.

At that time samples were obtained from the "ink pot" wash machine. On both sides of the plugged line from the "ink pot" machine, and an attempt was made to obtain sludge from the end of the pipe, however none was obtained. From the photo rooms area a liquid sample was obtained from a small collection sump along the East wall.

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES -
INDUSTRIAL WASTE AND HAZARDOUS MATERIALS CONTROL
15 HORSEBLOCK PLACE, FARMINGVILLE, N.Y. 11738
(516) 451-4633

NAME OF FACILITY		OWNER/OFFICER		PAGE 1 OF 4	
COMPANY NAME		CONTACT		TEL.	
PLANT ADDRESS		VILLAGE		TOWN	
MAILING ADDRESS		ZIP			

Commercial Envelope Mfg. Corp.
900 Grand Blvd.
Deer Park
Bab. N.Y.

DATE Feb 27, 86	TIME 8:50 AM	ORIG. PERIODIC RE.	WASTE	NO WASTE	H&H	SEWAGE SYSTEM	PUBLIC PRIVATE
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① 8 AM - on site; Chemical Pollution Control, CPC, arrived with pump truck + drum truck.

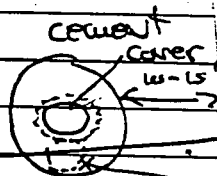
② Excavated "new" pool approx. 10-15 ft. West of previously abandoned leaching pools. Uncovered dome + cement cover, pool approx. 10-12 ft. wide, approx. 12-15 ft deep with unknown depth of sludge.

③ Assisted Engineering firm in removing liquid sample from pool, liquid appeared gray in color. (Eder Assoc. Consulting Eng. - Mr. Gregory Borech)

④ A hole had been broken thru the South slope of the dome, this is where liquid (industrial) entered the pool thru a pipe, CPC which then entered another leaching the pool.

eder associates
consulting engineers, p. c.

Gregory Borech
ENGINEER



85 FOREST AVE. • LOCUST VALLEY, N.Y. 11560 • (516) 671-8

cover not to grade
= 3ft below.

broken dome

⑤ NOTE: The soil has been excavated off the top of the three abandoned ink waste tanks. (hole approx. 12-15 x 5 ft deep x 40 ft long. There is evidence of cement having been poured around or into the tanks. The center tank has a 2" hole in it where liquid can be seen.

Along the side wall of the excavation there is evidence of ink waste i.e. blue/black deposits of hard sludge like material.

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
INDUSTRIAL WASTE AND HAZARDOUS MATERIALS CONTROL -
15 HORSEBLOCK PLACE, FARMINGVILLE, N.Y. 11738
(516) 451-4633

NAME OF FACILITY		OWNER/OFFICER		PAGE <u>2</u> OF <u>4</u>	
COMPANY NAME		CONTACT		TEL.	
PLANT ADDRESS		VILLAGE		TOWN	
MAILING ADDRESS		ZIP			

DATE	TIME AM/PM	ORIG. PERIODIC RE.	WASTE	NO WASTE	H&H	SEWAGE SYSTEM	PUBLIC PRIVATE
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I dug along a strata of this material for approx 6ft in length + found a 12ft. deep band of blue/black sludge + moist gray material. (will remove samples)

NOTE: There has been some work done around the industrial waste incinerator, there is a quantity of gray/blue stained "clinker" like material below the firing chamber. (will take sample)

There is also a by-pass valve below the firing chamber with a garden hose like threaded attachment.

There is fresh evidence of ink spillage along the south side of the garage doors. (observed wet blue black substance along garage folding door edge. There is a hole in the outside wall approx. 6-8ft. South of the incinerator, approx. 1ft. below a near by roof down pipe there is evidence of black runoff from the hole.

Removed sludge sample 1 DO 2/27 (u) from approx middle of inch waste sediment approx. 23ft. below grade, in the West corner of the excavation around

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
INDUSTRIAL WASTE AND HAZARDOUS MATERIALS CONTROL
15 HORSEBLOCK PLACE, FARMINGVILLE, N.Y. 11738
(516) 451-4633

NAME OF FACILITY		OWNER/OFFICER		PAGE <u>3</u> OF <u>4</u>	
COMPANY NAME		CONTACT		TEL.	
PLANT ADDRESS		VILLAGE	TOWN	ZIP	
MAILING ADDRESS					
DATE	TIME	ORIG. PERIODIC RE.	WASTE	NO WASTE	H&H
Feb 27/86	AM/PM				
		SEWAGE SYSTEM	PUBLIC PRIVATE		

Removed 2 DO 2/27 @ from middle "clinker" sediment below the firing chamber of the industrial waste incinerator.

Removed 3 DO 2/27 @ from blue/black sludge removed by bucket from the South edge of the industrial waste leaching pool. This "sludge" appeared ~~to~~ not to be similar to material from a typical sanitary leaching pool. There was no sewage odor or any material that would be associated with a sanitary pool. The sludge was thick, shiny black with particles of red, dark blue + light blue throughout. From previous experience at Commercial Envelope + other printers it would appear to be concentrated ink waste.

② The excavation of/over the underground ink tanks has been mentioned before in this report. During my inspection/observation of the pump out the excavation was discussed a number of times, with the consulting engineer Mr. Rorach + Mr. Roy Brannigan of Commercial Envelope, both knew nothing about the excavation or why it had occurred. During the late afternoon Mr. Krystal visited the site three times, these questions about the excavation were obviously asked of him by the Engineer Mr. Rorach, because Mr. Rorach said that the excavation was to "show" me (or SCDHS) that the tanks had been abandoned properly. (this is a stipulation within the Consent Order between Commercial Envelope + SCDHS)

The appearance of the tanks is thus, there were three very distinct mounds of gray material equi distant within the trench. The gray material (concrete) appeared fresh + moist; in between the middle mound + the West tank there was a gray moist mud like material that appeared very similar to freshly poured concrete. (I stepped a number of times in this very moist material)

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
INDUSTRIAL WASTE AND HAZARDOUS MATERIALS CONTROL
15 HORSEBLOCK PLACE, FARMINGVILLE, N.Y. 11738
(516) 451-4633

NAME OF FACILITY		OWNER/OFFICER		PAGE 4 OF 4	
COMPANY NAME		CONTACT		TEL.	
PLANT ADDRESS		VILLAGE		TOWN	
MAILING ADDRESS		ZIP			

Commercial Envelope Mfg. Corp.
Ground Blvd
Peer Park
Bab Wy

DATE Feb. 27, 86	TIME 4m/2m	ORIG.	PERIODIC	RE.	WASTE	NO WASTE	H&H	SEWAGE SYSTEM	PUBLIC PRIVATE
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To test this story I applied a pick axe to the mound of gray material located over the West + East most tanks. The material broke apart very easily, + it was possible to shovel the ~~stuff~~ stuff away from the square man way collars. I dug down approx. 6-8" in each man way, both West + East tanks. Almost immediately pink/red liquid forced itself into the excavations. We removed 1 RS 2/27 (O), + 4 DO 2/27 (M) from the West most tank, + 5 DO 2/27 (M) from the East most tank.

It was possible to force a 8ft x 1" piece of pipe down into the Western most tank and shift it in different directions across the area of the tank. It would appear that this tank is not filled very solidly.

I was unable to force the pipe down into the Eastern most tank, however I did not attempt to enlarge the excavation which was shallower of the two.

The center tank was not touched, ~~however~~ however this was a hole via a pipe sitting very close to the gray mounded material which I passed the same long pipe into, it passed thru approx. 5-6 ft. of gray liquid.

During my excavations Mr. Crystal appeared again, I questioned him as to the age of the ~~appearance~~ situation + he stated that no "new" material had been applied + that the tanks had laws as is ~~for~~ for three to four years.

My observations indicate to me that the man ways have recently been exposed + fresh cement applied, solely to convince the Dept. that the tank need no further work. Physical observations i.e. pink/red liquid + soundings by pipe indicate to me that the tanks are not properly abandoned, rather still containing liquid industrial waste.

DAVID O'BRIEN P23

NAME OF FACILITY: Commercial Envelope Mfg Co Inc
COMPANY NAME: TRA CR
CONTACT: Paul CR
PLANT ADDRESS: 900 GRAND BLVD
VILLAGE: Deer Park
TOWN: Longueville
MAILING ADDRESS: 11129
DATE: 24 Aug 84
TIME: 1:00 pm
ORIG: PERIODIC
NO WASTE: YES
SEWAGE SYSTEM: H&H
PUBLIC PRIVATE: PRIVATE

- ① Violation Article 12 Section 1207 Permit to operate 10,000 gallon in ground gasoline tank (unleaded) on the west side of the building is NOT REGISTERED with the county.
- ② Violation Article 12 Section 1215 Drum storage area on the west side of has not been registered with the county. Drums are not stored in a proper manner so as to permit proper inspection by county.
- ③ Any sludge removed from the incinerator unit on the east side of the building must be skimmed & hauled by a N.Y. STATE lic. SCRAPPER, NOT placed on the ground area.
- ④ Facility has not as of this date submitted an engineering report as per consent order.
- ⑤ Violation Article 10 Section 1006 the following units are operating in violation of article 10 section 1006; operating without certificate to operate.
 - ① washing machine
 - ② Cyclone
 - ③ BAKER
- ⑥ Violation Article 12 Section 1207 2000 gallon waste holding tank (above ground) on the east side of the building is NOT registered with the county.
- ⑦ Violation Article 12 Section 1215 Drum storage on west side of building of $\approx 50-60 \times 55$ gal drums ROBERTSON CARLSON INKS.
- ⑧ Violation Article 12 Section 1215 TRACTOR TRAILER filled with $\approx 75-100 \times 55$ gallon drums, unable to determine entire contents. (some labeled "61-CR", Cellulose Nitrate Solution INKS;

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
INDUSTRIAL WASTE AND HAZARDOUS MATERIALS CONTROL
15 HORSEBLOCK PLACE, FARMINGVILLE, NY 11738
(516) 431-2455

NAME OF FACILITY: <u>Commercial Envelope Mfg Co. Inc.</u>		OWNER/OFFICER: <u>IRA Crystal</u>	PAGE 1 OF
COMPANY NAME:		CONTACT:	TEL: <u>242-2500</u>
PLANT ADDRESS: <u>900 GRAND BLVD</u>	VILLAGE: <u>DEER PARK</u>	TOWN: <u>BABYLON</u>	ZIP: <u>11729</u>
MAILING ADDRESS:			
DATE: <u>24 Aug 84</u>	TIME: <u>1:00 pm</u>	ORIG. PERIODIC <input checked="" type="radio"/> (RE-) <input type="radio"/> WASTE	NO WASTE <input type="checkbox"/> H&H <input type="checkbox"/> SEWAGE SYSTEM <input type="checkbox"/> PUBLIC <input type="checkbox"/> PRIVATE <input type="checkbox"/>

⑨ \approx 4000 GALS + \approx 2000 GAL holding tanks for "glue" on the west side of building (above ground) NOT REGISTERED with the county; not in compliance with Article 12. (1215, 1207)

⑩ Sinks (2x) in DARK ROOM AREA ARE NOT discharging to the 2000 GALLON WASTE TANK on the east side of the building. (Dye test (using green dye) conducted. 1 bottle of powdered dye used, did NOT appear in tank; observed for \approx 2 HRS.)

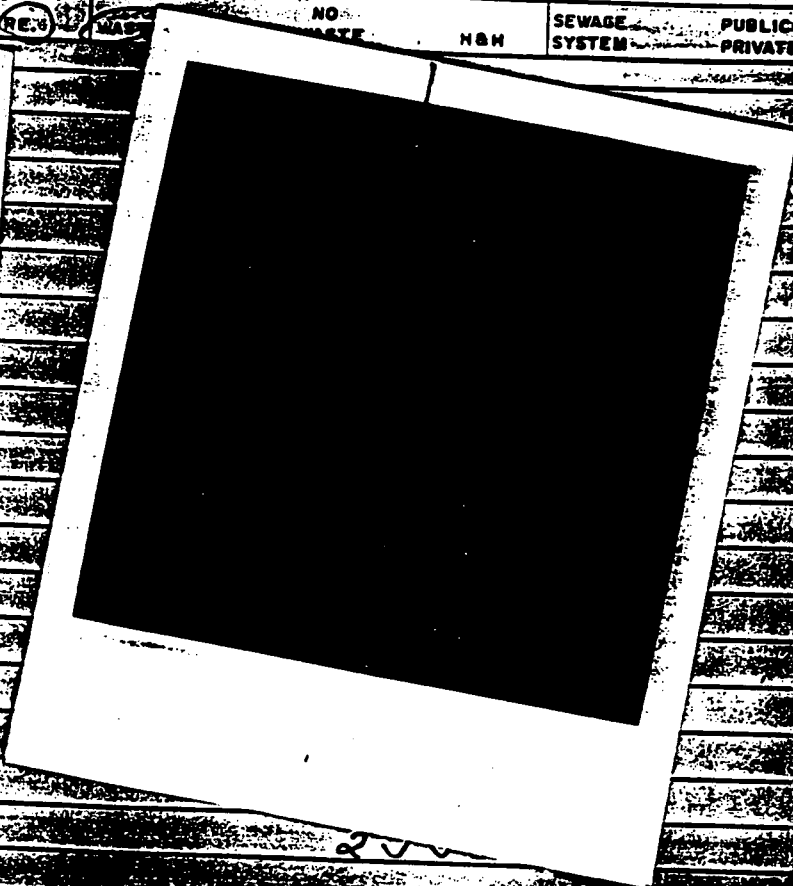
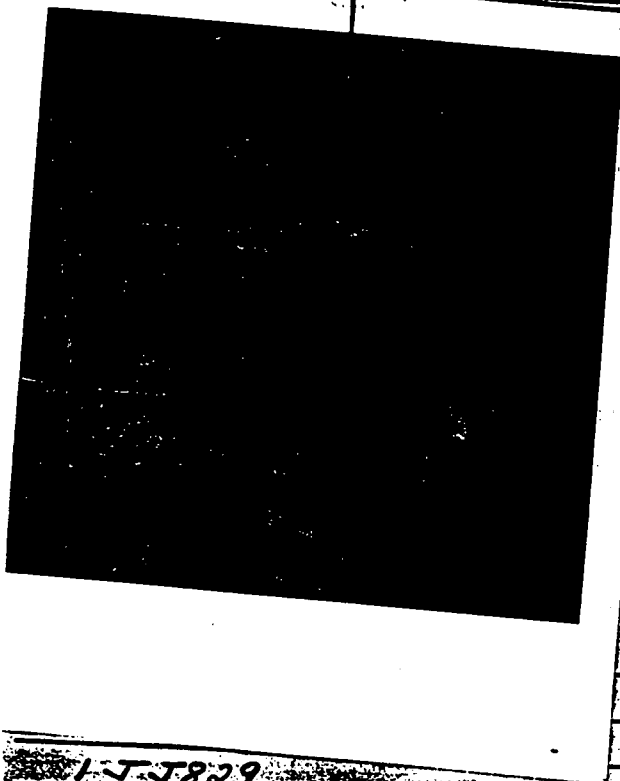
⑪ overflowing "pool" on the east side of the building, material is cloudy white in color + resembling to a storm drain. (odor is foul) Presently will be called a violation of Article 2 section VB, discharge of deleterious materials.

⑫ Spence Johnson
ADP/Manager

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
INDUSTRIAL WASTE AND HAZARDOUS MATERIALS CONTROL
15 HORSEBLOCK PLACE, FARMINGVILLE, N.Y. 11738
(516) 451-5533

PAGE ONE

NAME OF FACILITY <i>Commercial Envelope Mfg. Co. Inc</i>		OWNER <i>IRA CRYSTAL</i>	PAGE 1 OF
COMPANY NAME		CONTACT <i>LEROY BRANNIGAN</i>	TEL <i>242-2500</i>
PLANT ADDRESS <i>900 GRAND BLVD</i>	VILLAGE <i>DEER PARK</i>	TOWN <i>BABYLON</i>	ZIP <i>11729</i>
MAILING ADDRESS			
DATE <i>19 AUGUST 84</i>	TIME <i>11:45 AM</i>	ORIG. PERIODIC <input checked="" type="checkbox"/> REG <input checked="" type="checkbox"/> WAS <input type="checkbox"/>	NO WASTE <input type="checkbox"/> H&M <input type="checkbox"/> SEWAGE SYSTEM <input type="checkbox"/> PUBLIC <input type="checkbox"/> PRIVATE <input type="checkbox"/>



1-JJ829 - this photo identifies 2 cement chimneys leading to in-ground industrial waste holding tanks which do not appear to have been abandoned properly in accordance with Article 12. I make this statement because a sample was procured from the most westerly chimney obviously containing a liquid substance (concrete) sand or other substrate should be to grade (completely filled) which it (they) obviously are not or removed.

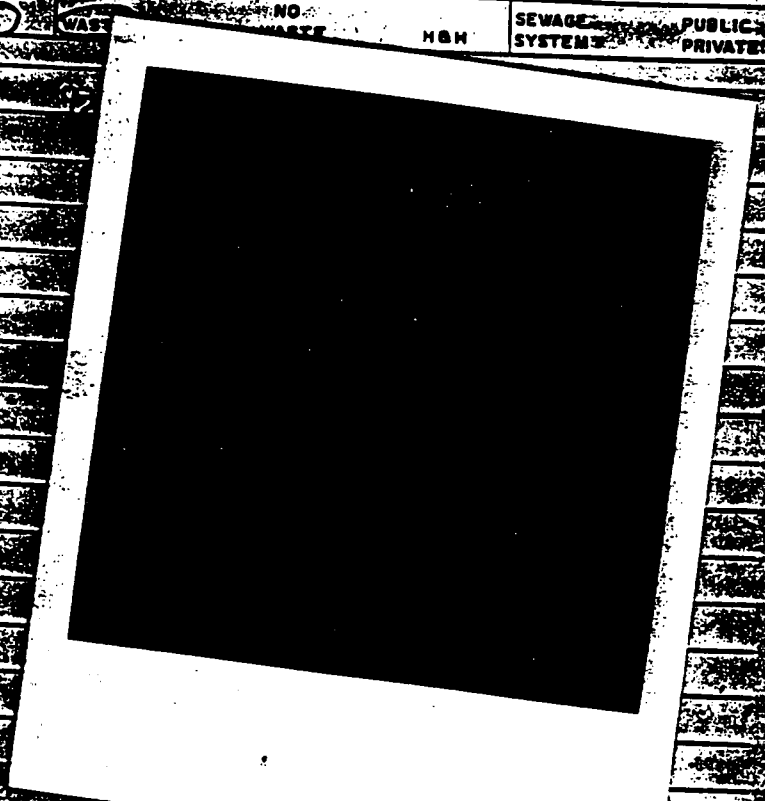
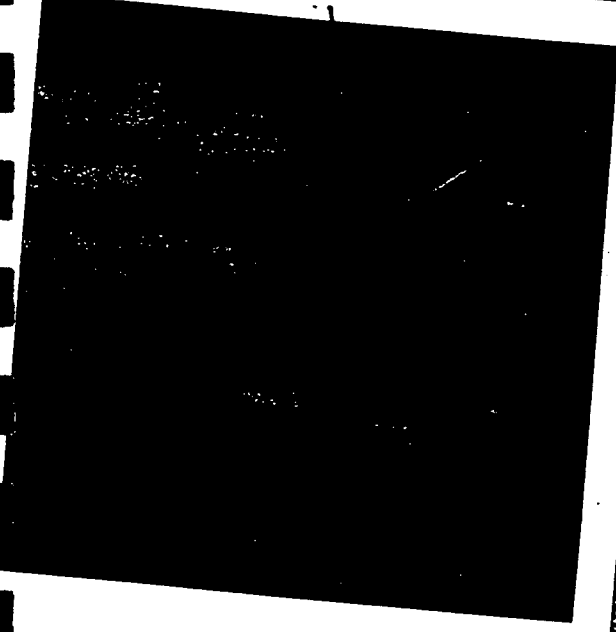
2-JJ829 - this photo identifies a large area of overflow discharging to a storm drain. Overflow is emanating from an area identified to me by Mr. Leroy Brannigan as an industrial waste holding tank that was suppose to be abandoned by the facility some time ago.

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
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15 HORSEBLOCK PLACE, FARMINGVILLE, N.Y. 11738
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PAGE TWO

NAME OF FACILITY <i>Commercial Envelope Mfg Co Inc</i>	OWNER / OFFICER <i>IRA CRYSTAL</i>	PAGE 1 OF
COMPANY NAME	CONTACT <i>LEROY BRANNIGAN</i>	TEL. <i>242-2500</i>
PLANT ADDRESS <i>900 Grand Blvd</i>	VILLAGE <i>DEER PARK</i>	TOWN <i>BABYLON</i>
MAILING ADDRESS	ZIP <i>11729</i>	

DATE <i>29 AUG 84</i>	TIME <i>11:45 AM</i>	ORIG. <i>RE</i>	PERIODIC	WASTE	NO WASTE	H&H	SEWAGE SYSTEMS	PUBLIC PRIVATE
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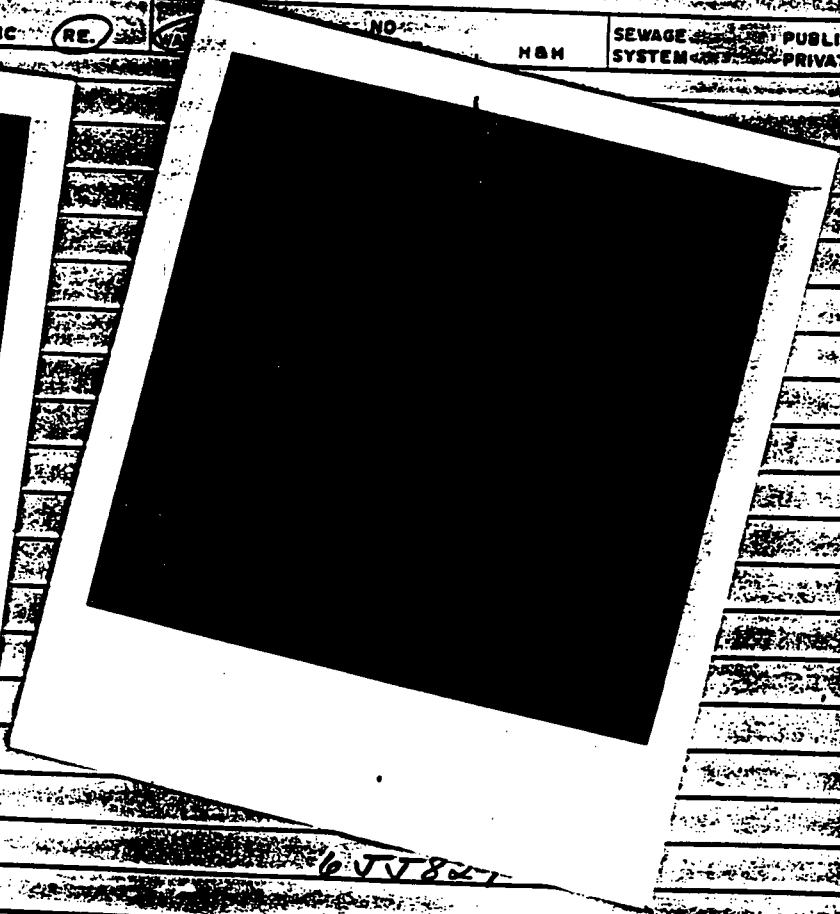
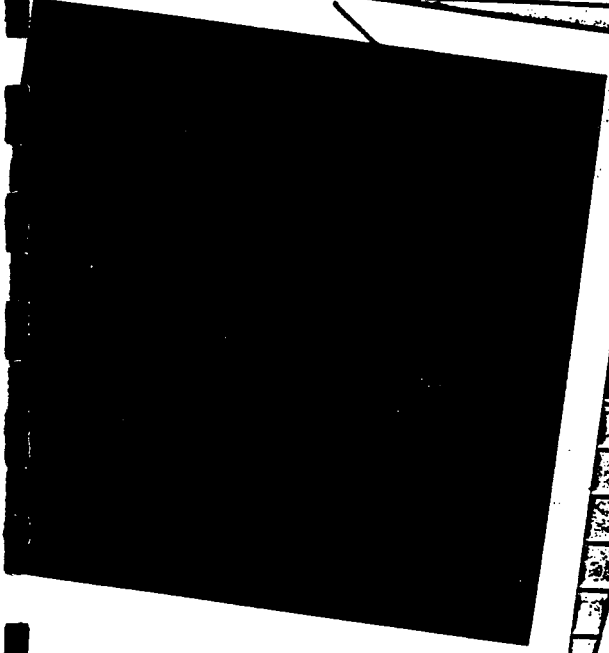
355829 - This photo further identifies area of overflowing material (additional) to the material flowing into the storm drain (255829), the material is also draining into a solid covered pools.

355829 - This photo identifies the cloudy white color of the overflowing material, source of generation, and spread of plume. Overflow material was witnessed bubbling out of "pool" by myself, Mr. ORRIG & Mr. Brannigan. This material also had a distinctive odor that I associate with "glue" waste based on inspections of other firms using this type of material. Mr. Brannigan also stated that the material was glue waste from machinery in use within the building.

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
INDUSTRIAL WASTE AND HAZARDOUS MATERIALS CONTROL
15 HORSEBLOCK PLACE, FARMINGVILLE, N.Y. 11738
(516) 451-4633

Page three

NAME OF FACILITY: <i>Commercial Envelope Mfg Co Inc</i>		OWNER/OFFICER: <i>ELRA CRYSTAL</i>	PAGE 1 OF
COMPANY NAME:		CONTACT: <i>LEROY BRANNIGAN</i>	TEL: <i>2-42-2500</i>
ADDRESS: <i>900 Grand Blvd</i>	VILLAGE: <i>Deerpark</i>	TOWN: <i>Babylon</i>	ZIP: <i>11729</i>
LONG ADDRESS:			
DATE: <i>5/24</i>	TIME:	ORIG. PERIODIC <input checked="" type="checkbox"/> RE. <input type="checkbox"/>	NO. H&M SEWAGE SYSTEM PUBLIC PRIVATE



5JT829

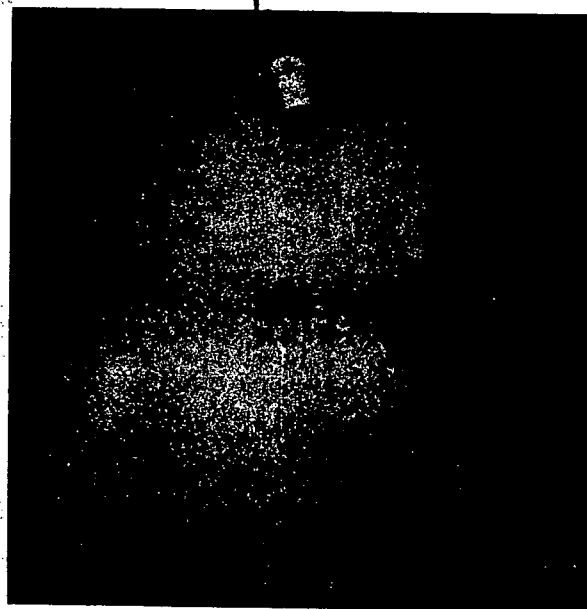
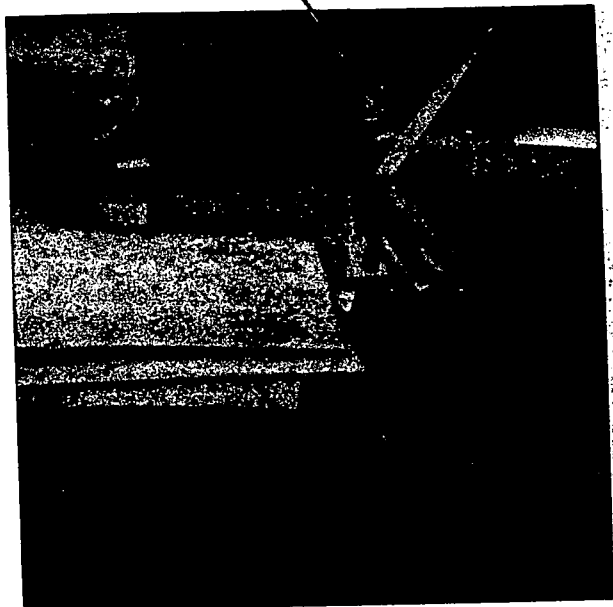
6JT829

5JT829-6JT829

Side View & Close up frontal view of overflowing "pool" (Active)
note bubbles in 6JT829

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
INDUSTRIAL WASTE AND HAZARDOUS MATERIALS CONTROL
15 HORSEBLOCK PLACE, FARMINGVILLE, N.Y. 11738
(516) 451-4633

NAME OF FACILITY <i>Commercial Envelope Mfg Co Inc</i>		OWNER/OFFICER <i>IRA CRYSTAL</i>	PAGE 1 OF
COMPANY NAME		CONTACT <i>LEROY BRANNIGAN</i>	TEL <i>242-2500</i>
PLANT ADDRESS <i>900 GRAND BLVD</i>	VILLAGE <i>DEER PARK</i>	TOWN <i>BABYLON</i>	ZIP <i>11729</i>
MAILING ADDRESS			
DATE <i>29 AUG 84</i>	TIME <i>11:45 AM</i>	ORIG. <input checked="" type="checkbox"/> PERIODIC <input type="checkbox"/>	WASTE <input checked="" type="checkbox"/> NO WASTE <input type="checkbox"/> H&H <input type="checkbox"/>
		SEWAGE SYSTEM <input type="checkbox"/>	PUBLIC <input type="checkbox"/> PRIVATE <input type="checkbox"/>



1-J-829

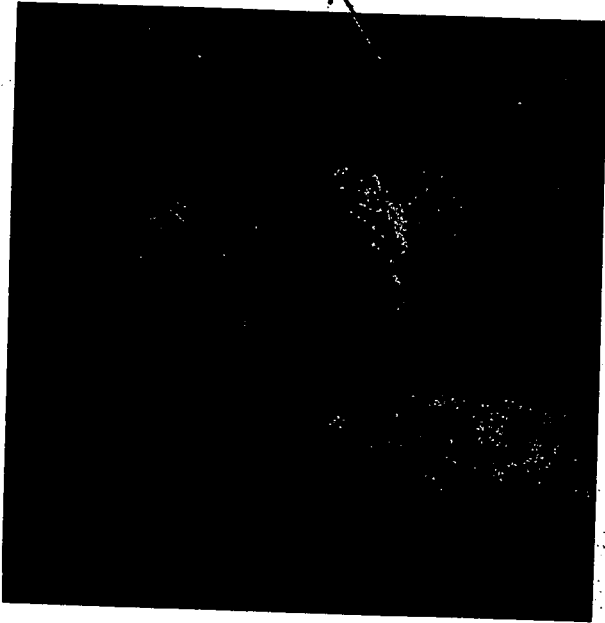
8-J-829

*7-J-829 { these photos identify that the overflow was
8-J-829 } indeed active at the time of inspection.
(Note bubbles in both photos)*

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
INDUSTRIAL WASTE AND HAZARDOUS MATERIALS CONTROL
15 HORSEBLOCK PLACE, FARMINGVILLE, N.Y. 11738
(516) 451-4633

PAGE FIVE

NAME OF FACILITY <i>Commercial Envelope Mfg Co Inc</i>		OWNER/OFFICER <i>TRA Crystal</i>	PAGE 1 OF
COMPANY NAME		CONTACT <i>KEROY Brannigan</i>	TEL. <i>242-2500</i>
PLANT ADDRESS <i>900 Grand Blvd</i>	VILLAGE <i>Deer Park</i>	TOWN <i>Babylon</i>	ZIP <i>11729</i>
MAILING ADDRESS			
DATE <i>29 AUG 84</i>	TIME <i>11:45 AM</i>	ORIG. PERIODIC <input checked="" type="radio"/> RE <input type="radio"/> WASTE	NO WASTE H&H SEWAGE SYSTEM PUBLIC



9JJ829

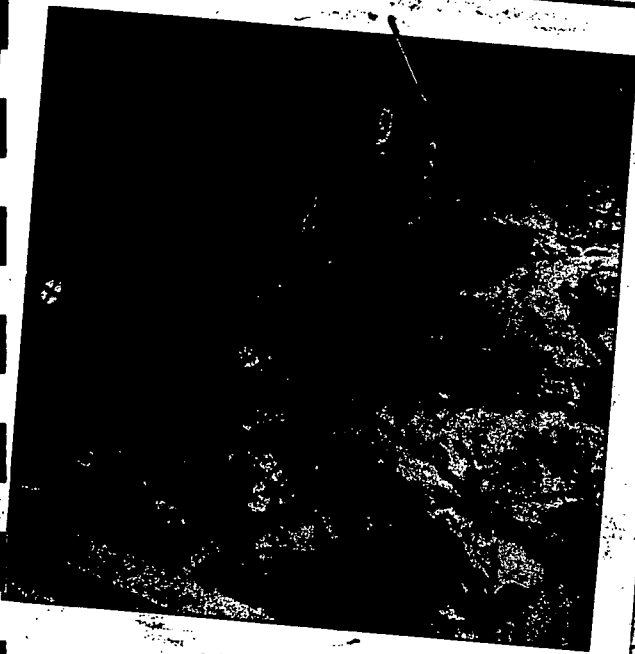
10JJ829

9JJ829 - overflow from "bubbling pool" actively draining to solid covered pool. (see diagram)

10JJ829 - overflow from "bubbling pool" traveling to second solid covered pool which was also receiving this overflow. (Reflection of MR OBRIG & MR Brannigan)

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
INDUSTRIAL WASTE AND HAZARDOUS MATERIALS CONTROL
15 HORSEBLOCK PLACE, FARMINGVILLE, N.Y. 11738
(516) 451-4633

NAME OF FACILITY <i>Commercial Envelope Mfg Co Inc</i>		OWNER/OFFICER <i>TRA Crystal</i>	PAGE 1 OF
COMPANY NAME		CONTACT <i>LEROY BRANNIGAN</i>	TEL. <i>242-2500</i>
PLANT ADDRESS <i>900 Grand Blvd</i>	VILLAGE <i>DEER PARK</i>	TOWN <i>BARBUDON</i>	ZIP <i>11729</i>
MAILING ADDRESS			
DATE <i>11/24</i>	TIME <i>11:45 AM</i>	ORIG. PERIODIC <input checked="" type="checkbox"/>	NO WASTE <input type="checkbox"/> H&H <input type="checkbox"/> SEWAGE SYSTEM <input type="checkbox"/> PUBLIC <input type="checkbox"/>



11 JJ 829



12 JJ 829

11 JJ 829 - Area adjacent to dumpster showing large accumulation of both sludge & oil.

12 JJ 829 - Photo indicates obvious pool of oil (oil also noted in large amounts under dumpster but was too dark to photograph).

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
INDUSTRIAL WASTE AND HAZARDOUS MATERIALS CONTROL
15 HORSEBLOCK PLACE, FARMINGVILLE, N.Y. 11738
(516) 451-4633

NAME OF FACILITY <i>Commercial Envelope Mfg Co Inc</i>		OWNER/OFFICER <i>TRA Crystal</i>	PAGE 1 OF
COMPANY NAME		CONTACT <i>Leedy Brannigan</i>	TEL. <i>242-2800</i>
PLANT ADDRESS <i>900 Grand Blvd</i>	VILLAGE <i>DEER PARK</i>	TOWN <i>BABYLON</i>	ZIP <i>11729</i>
MAILING ADDRESS			

DATE <i>11/11/82</i>	TIME <i>11:45 AM</i>	ORIG.	PERIODIC	<input checked="" type="checkbox"/> RE	<input type="checkbox"/> WASTE	NO	H&H	SEWAGE SYSTEM	PUBLIC PRIVATE
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13 JT 829

14 JT 829

13 JT 829 } loading dock area showing sludge & storm
14 JT 829 } drain cover

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
INDUSTRIAL WASTE AND HAZARDOUS MATERIALS CONTROL
15 HORSEBLOCK PLACE, FARMINGVILLE, N.Y. 11738
(516) 451-4633

Page Eight

NAME OF FACILITY <i>Commercial Envelope Mfg Co Inc</i>		OWNER/OFFICER <i>IRA CRYSTAL</i>	PAGE 1 OF
COMPANY NAME		CONTACT <i>LEROY BRANNIGAN</i>	TEL. <i>242-2500</i>
PLANT ADDRESS <i>900 Grand Blvd</i>	VILLAGE <i>DEER PARK</i>	TOWN <i>BABYLON</i>	ZIP <i>11729</i>
MAILING ADDRESS			
DATE <i>8/29/84</i>	TIME <i>4:45</i>	NO WASTE <input checked="" type="checkbox"/> WASTE <input checked="" type="checkbox"/>	SEWAGE SYSTEM <input checked="" type="checkbox"/> PUBLIC <input checked="" type="checkbox"/> PRIVATE <input checked="" type="checkbox"/>



15 JT829

15 JT829 - After samples were procured from this storm drain located in the loading dock, photo was taken of gloves used by myself while handling the bottles, and of sampling weight.

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
INDUSTRIAL WASTE AND HAZARDOUS MATERIALS CONTROL
15 HORSEBLOCK PLACE, FARMINGVILLE, N.Y. 11738
(516) 451-4633

NAME OF FACILITY		OWNER/OFFICER <u>Mr. Joe Krystel</u>		PAGE ____ OF ____	
COMPANY NAME <u>Commercial Envelope Mfg. Corp.</u>		CONTACT <u>"</u>		TEL. _____	
PLANT ADDRESS <u>900 Grand Blvd.</u>		VILLAGE <u>Deerpark</u>	TOWN <u>Bab. N.Y.</u>	ZIP _____	
MAILING ADDRESS _____					
DATE <u>Feb. 3, 86</u>	TIME <u>PM</u>	ORIG. PERIODIC RE.	WASTE <input checked="" type="checkbox"/>	NO WASTE <input type="checkbox"/>	H&H <input type="checkbox"/>
			SEWAGE SYSTEM		PUBLIC <input type="checkbox"/> PRIVATE <input type="checkbox"/>

① CPC on site removing liquid + sludge from loading dock area.

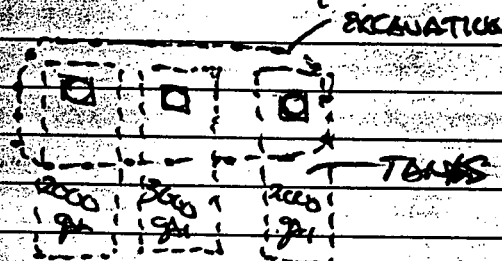
② Site of "bubbling pool" which contained leaching pool below has been completely scavenged i.e. liquid + sludge removed down to clean sand.

Inspected area + gave approval for filling in pool with sand; (to grade.)

Pool by inspection was approx 12 ft. wide + 3 rungs deep, approx 15 ft. There were no external pipes entering the pool, the only method that the material entered the pool was thru the hole broken thru the side wall of the dome.

③ Was informed by Edco Assn. rep. that ~~material~~ Mr. S. Krystel informed him that the underground ink waste tanks are, 2x2000, 1x3000 with the largest in the middle, the main ways are off center, 1/4 from each end tank, largest of tank is to the South of the main ways.

④ Incineration has not been running all day.



Don Ob, PHS

REFERENCE NO. 7

CONTROL NO:

DATE:

7/15/87

TIME:

0935 HRS

DISTRIBUTION:

COMMERCIAL ENVELOPE MFG.
TDD 02-8704-03

BETWEEN:

D. OBRIG

OF: SUFFOLK COUNTY
HEALTH DEPT

PHONE:

(516) 451-463

AND:

E. L. LEONARD

(NUS)

DISCUSSION:

RE: BACKGROUND INFO.

- SPDES PERMIT FOR COOLING WATER ONLY,
NONE FOR INDUSTRIAL WASTE. NOT SURE
IF PERMIT ACTIVE. DISCHARGES TO GROUNDWATER.

- RCRA PERMIT NONE. THEY ARE PERMITTED
UNDER SUFFOLK COUNTY ART. 12 TO HAVE
~~TWO~~ 2000 GAL. HOLDING TANK (INSIDE/ABOVEGROUND
+ TO ~~HAVE~~ + HOLD + HAUL DRUMS OF WASTE.
THE UNDERGROUND TANK + LEACHING POOLS
WERE ILLEGAL.

- NEVER DID PROVE IF UNDERGROUND TANKS
LEAKED OR NOT.

ACTION ITEMS:

- THERE WAS A 3 MONTH PERIOD THAT NO
NATURAL GAS WAS UTILIZED BY THE INCINERATOR
BUT THEY STILL PRODUCED WASTE. WHERE DID
WASTE GO, IF AS THEY STATED THEY WERE NOT USING
UNDERGROUND TANK + LEACHING POOLS.

REFERENCE NO. 8

LAB NO. IW- 775020
FIELD NO. 700927/9

DATE COMPLETED
EXAMINED BY
ERC 8/19/85 OL

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
DIVISION OF MEDICAL LEGAL INVESTIGATIONS & FORENSIC SCIENCES
PUBLIC HEALTH LABORATORY

TRACE ORGANIC ANALYSIS OF INDUSTRIAL WASTE

Name Commercial Envelope Mfg. Corp.

Location 900 Grand Blvd. Deer Park NY.

Point of Collection Green dye colored liquid from

Remarks: pool below pipe ^{external} discharging into area #2.
observed active discharge from pipe to pool.

Compound	pbb	Compound	ppb
Ethylene Chloride.....	180	Cis Dichloroethylene.....	110
Freon 113.....	420	Benzene.....	420
Chloroform.....	420	Toluene.....	270
1,1,1 Trichloroethane.....	420	Chlorobenzene.....	420
Carbon Tetrachloride.....	420	Ethylbenzene.....	52
1,1,2 Trichloroethylene.....	33	Xylene(s).....	500
Bromodichloromethane.....	—	Bromobenzene.....	420
1,1,2 Trichloroethane.....	420	Chlorotoluene(s).....	420
Chlorodibromomethane.....	—	1,3,5 Trimethylbenzene.....	100
Tetrachloroethylene.....	420	1,2,4 Trimethylbenzene.....	420
Bromoform.....	—	m,p-Dichlorobenzene.....	420
1,1,2,2 Tetrachloroethane...	420	o-Dichlorobenzene.....	420
Octane.....	420	p-Diethylbenzene.....	—
Styrene.....	420	1,2,4,5 Tetramethylbenzene...	—
n-Nonane.....	—	1,2,4 Trichlorobenzene.....	420
p-Ethyltoluene.....	210	1,2,3 Trichlorobenzene.....	—
n-Decane.....	190	1,2 Dichloroethane —	420
n-Undecane.....	120	1,1 Dichloroethane —	420
		Dichloroethylene —	—

During transport of the sample from collection point to laboratory, the chain of custody must not be broken. The sample should be delivered by the sample collector or a designated representative who will sign for the receipt, integrity, and transfer of the sample during shipment.

	SIGNATURE	AFFILIATION	DATE	TIME
1. Collected by	<u>D. J. G.</u>	<u>SCDHS</u>	<u>7/9/85</u>	<u>1:45 PM</u>
2. Transferred to	<u>Eric J. Mangione</u>	<u>SCDHS</u>	<u>7-9-85</u>	<u>1:45 PM</u>
3. Transferred to	<u>Kenneth M. Hill</u>	<u>SCDHS</u>	<u>7-9-85</u>	<u>3:30 PM</u>
4. Transferred to				

DATE COMPLETED 10-13-84
EXAMINED BY EAT PA

SR 10/19/84 OL

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
DIVISION OF MEDICAL LEGAL INVESTIGATIONS & FORENSIC SCIENCES
PUBLIC HEALTH LABORATORY

TRACE ORGANIC ANALYSIS OF INDUSTRIAL WASTE

Name Commercial Envelope
Location 900 Grand Blvd, DP
Point of Collection Storm drain in loading dock east
Remarks: side of bldg.

Compound	pbb	Compound	ppb
Methylene Chloride.....	(71)	Cis Dichloroethylene.....	(2300)
Freon 113.....	<4	Benzene.....	(11)
Chloroform.....	—	Toluene.....	(500)
1,1,1 Trichloroethane.....	15	Chlorobenzene.....	212
Carbon Tetrachloride.....	21	Ethylbenzene.....	16
1,1,2 Trichloroethylene.....	(520)	Xylene(s).....	(65)
Bromodichloromethane.....	<3	Bromobenzene.....	416
1,1,2 Trichloroethane.....	<5	Chlorotoluene(s).....	<12
Chlorodibromomethane.....	<2	1,3,5 Trimethylbenzene.....	20
Tetrachloroethylene.....	(970)	1,2,4 Trimethylbenzene.....	45
Bromoform.....	<5	m,p-Dichlorobenzene.....	<14
1,1,2,2 Tetrachloroethane...	<3	o-Dichlorobenzene.....	<14
Octane.....	<40	p-Diethylbenzene.....	<10
Styrene.....	49	1,2,4,5 Tetramethylbenzene...	<10
n-Nonane.....	(190)	1,2,4-Trichlorobenzene.....	416
p-Ethyltoluene.....	(50)	1,2,3 Trichlorobenzene.....	418
n-Decane.....	(400)		
n-Undecane.....	(64)		

During transport of the sample from collection point to laboratory the chain of custody must not be broken. The sample should be delivered by the sample collector or a designated representative who will sign for the receipt, integrity, and transfer of the sample during shipment.

SIGNATURE

AFFILIATION

DATE

TIME

- Collected by J. DeHaven SCDHIS 8/29/84 1:06 pm
- Transferred to Richard H. Hollander SCPHL 8/29/84 1:17
- Transferred to _____

SUFFOLK COUNTY HEALTH SERVICES LABORATORY
CHEMICAL EXAMINATION OF WATER, SEWAGE, INDUSTRIAL WASTE

18-247: 2/82

FIELD NO. 1003/27 LAB NO. 2-86-122 DATE COMPLETED 3/11/86 *ls-yallen*

NAME OR FIRM Commercial Envelope Mfg. Corp.
 ADDRESS OR LOCATION Gravel Blvd. Deer Park
 POINT OF COLLECTION Blue/green material found, 2ft below grade,
 REMARKS/INSTRUCTIONS in West side of waste ink tank excavation.

TEST	RESULTS	TEST	RESULTS	TEST	RESULTS
PH (LAB)		TOTAL SOLIDS	Mg/l	COPPER	865. ppm
CHLORIDE	Mg/l	SUSPENDED SOLIDS		IRON	
CYANIDE		DISSOLVED SOLIDS		MANGANESE	
MBAS		(EPA Analysis Soil, Method)		CHROMIUM-TOT	37
OD				NICKEL	25
TOC				ZINC	
				LEAD	166
				CADMIUM	< 2.2
TRATE-N				SILVER	< 2.2
NITRITE				CHROMIUM-+6	
MMONIA-N					
TKN		PH (FIELD)			
		TEMP. (FIELD)			

METHOD OF PRESERVATION ☐ HNO₃ TO pH < 2 ☐ COOL 4° C

CUSTODY OF SAMPLE

DURING TRANSPORT OF THE SAMPLE FROM SAMPLING SITE TO LABORATORY, THE CHAIN OF CUSTODY MUST BE UNBROKEN. GENERALLY THIS WILL REQUIRE THAT THE SAMPLE BE DELIVERED BY THE SAMPLE COLLECTOR OR HIS DESIGNATED REPRESENTATIVE WHO WILL SIGN FOR THE RECEIPT, INTEGRITY AND TRANSFER OF THE SAMPLE DURING SHIPMENT.

	NAME	AFFILIATION	DATE - TIME	TO	DATE - TIME
COLLECTED BY	<i>David O'Leary</i>	SCDHS	2/27/86 11:00		
POSSESSION BY	<i>David O'Leary</i>	SCDHS	2/27/86 11:00	2/27/86 12:00 PM	
POSSESSION BY					
RECEIVED LAB BY	<i>B. Yallen</i>		2/27 12:00		
POSSESSION BY					
POSSESSION BY					

FIELD

LABORATORY

NO. 10015-1LAB NO. 1-81-41BY David Obery
NAME, NOT INITIALSTYPE SAMPLE IND - PPACOL. 15 Jan 81DATE REC'D. 1/15COL. 2⁰⁰ PMTIME REC'D. 4:20 PMDATE COMPLETED 1/30/81EXC. Cr to 2/9/81SUFFOLK COUNTY HEALTH SERVICES LABORATORY
CHEMICAL EXAMINATION OF WATER, SEWAGE, INDUSTRIAL WASTENAME OR FIRM Commercial Envelope Co.ADDRESS OR LOCATION 900 Grand Blvd. Derby Park.DATE OF COLLECTION Spill, 30th. Dec, ppe thru. fence.

REMARKS/INSTRUCTIONS

TEST	RESULT	TEST	RESULT $\frac{\text{mg.}}{\text{liter}}$	TEST	RESULT $\frac{\text{mg.}}{\text{liter}}$
CONDUCT	umho	NITRATE-N		COPPER	1.0 2.8
pH		NITRITE		IRON	
TEST	RESULT $\frac{\text{m.g.}}{\text{liter}}$	AMMONIA-N		MANGANESE	
ph. ALKALINITY		TKN		CHROMIUM	43.
T. ALKALINITY		O-PO ₄ -P		NICKEL	
CHLORIDE				ZINC	5.0 11.
FLUORIDE				MAGNESIUM	
CYANIDE		TOT. SOLIDS		CALCIUM	
		SUS. SOLIDS		LEAD	109 2.1 x 10 ²
SULFATE		DISS. SOLIDS		CADMIUM	.01
BAS				SILVER	.1 2.1
C.O.D.				SODIUM	
O.C.				POTASSIUM	
				BARIUM	
		FIELD D.O.			
		FIELD TEMP			
		FIELD pH			
		FIELD COND.	umho		

REFERENCE NO. 9

02-8704-03

SUFFOLK COUNTY WATER AUTHORITY

Administrative Offices: OAKDALE, LONG ISLAND, NEW YORK 11769

Area Code 516-589-5200

WILLIAM J. SCHICKLER, P.E.
Chief Engineer

August 3, 1987

E. L. Leonard
NUS Corporation
1090 King Georges Post Road
Suite 1103
Edison, New Jersey 08837

Dear Mr. Leonard:

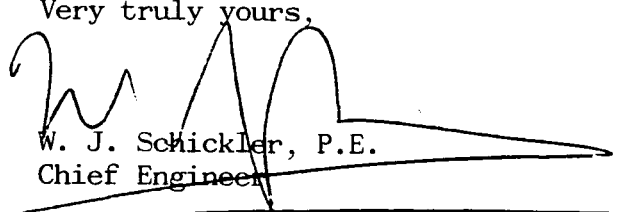
With reference to your letter of July 21, 1987, please find enclosed a marked-up copy of the map you submitted with the Suffolk County Water Authority well fields added in red. You will also find, enclosed herein, a data sheet for each of the eleven (11) Authority well fields located within your area of interest. There are currently no significant contamination problems at any of these well fields.

It should be noted that there are two (2) other public water suppliers located in portions of this area, namely; Brentwood Water District and Dix Hills Water District. Information about wells owned by these districts must be requested directly from them.

The Suffolk County Water Authority distribution system is fully integrated in this area and therefore the population served by an individual well field is not available. The estimated population residing in the Authority portion of the designated area, based on 1985 surveys, is 85,000 to 90,000 persons. Of this figure, about 88% are currently being served.

If any further information is required, please advise.

Very truly yours,


W. J. Schickler, P.E.
Chief Engineer

WJS:SRD:DMR

PLYMOUTH STREET WELL FIELD AND PUMPING STATION

Location: East End of Plymouth Street,
North Deer Park

Plot Plan Drawing No.: BL-1004-4

Station Data:

Area of Site: 8.0 Acres
Type of Structure: Brick
Telemetry: Yes

Standby Diesel Generator Set Installed: 60-80 KW
Fence Enclosure Type: Chain Link

WELL DATA:

S.C.W.A. Well No.	D.E.C. Well No.	W.S.A. No.	Decision Date	Well Dwg. No.	Dia.	Depth	Type	Date in Service	Status	Type of Structure	Remarks
1	S-18261	3565	3-3-59	BL-1079-22	16"x12"	377'-3 3/4"	Rotary	5-13-60	Permanent	Conc. Vault	
2	S-18621	3565	3-3-59	BL-1114-3	16"x12"	201'-1 3/4"	"	7-3-60	"	" "	
3	S-22548	4578	1-9-64	BL-1707-7	16"x12"	415'-6 3/4"	"	9-25-64	"	S & S*	

PUMPING EQUIPMENT:

Well No.	D.W.T./Vac.	Actual Rated Capacity(GPM)	Auth. Capacity(GPM)
1	D.W.T.	950	1000
2	D.W.T.	965	1000
3	D.W.T.	1000	1000

CHEMICAL TREATMENT:

Lime (For Corrosion Control) Yes
Chlorination Type Hypochlorinator

REMARKS:

* S & S Underground Substructure & Prefabricated Superstructure
500,000 Gallon Elevated Tank Located on Site

Brook Avenue Well Field and Pumping Station

Location: W/S of Brook Avenue between Morgan Avenue
and DeKay Place, Deer Park

Plot Plan Drawing No.: BL-1442-1

Station Data:

Area of Site: 6.08 Acres

Type of Structure: Brick

Telemetry: Yes

Standby Diesel Generator Set Installed: 350 KW

Fence Enclosure Type: Chain Link

WELL DATA:

S.C.W.A. Well No.	D.E.C. Well No.	W.S.A. No.	Decision Date	Well Dwg. No.	Dia.	Depth	Type	Date in Service	Status	Type of Structure	Remarks
1	S-25046	4673	6-11-64	BL-1774-22	16"x12"	448'	Rotary	6-9-65	Permanent	S & S*	
2	S-25617	4958	7-22-65	ABL-3063-5	16"x12"	440'-5"	"	5-20-66	"	"	
3	S-36714	5789	1-8-70	ABL-4913-7	20"x12"	307'-6 1/8"	"	7-31-70	"	Conc. Vault	
4	S-55463	6539	5-15-75		20"x12"	362'-6"	"	10-12-76	"	"	

PUMPING EQUIPMENT:

Well No.	D.W.T./Vac.	Actual Rated Capacity(GPM)	Auth. Capacity(GPM)
1	D.W.T.	1200	1200
2	Submersible D.W.T.	1200	1200
3	D.W.T.	1200	1200
4	D.W.T.	1400	1400

CHEMICAL TREATMENT:

Lime (For Corrosion Control) Yes

Calgon (For Iron Inhibition) Yes

Chlorination Type Permanent Gas

REMARKS:

* S & S Underground Substructure & Prefabricated Superstructure

Station Data:
Area of Site: 1.01 Acres
Type of Structure: Brick & Concrete Block
Telemetering: Yes

Standby Generator Set Installed:
Space Provided for Generator Set:
Fence Enclosure Type: Chain Link

WELL DATA:				Well	Date in	Status	Type of	Remarks	
S.C.W.A.	D.E.C.	W.S.A.	Decision	Dwg.	Service		Structure		
Well	Well	No.	Date	No.					
No.	No.	No.							
1	S-55733	6552	6-16-75	ABS-7069-19	20"x12" 232'-8½"	Rotary	7-16-76	Permanent	Vault
2	S-55734	6552	6-16-75	ABS-7198-7	20"x12" 308'	Rotary	7-16-76	"	Vault
3	S-66429	6915	10-30-78	ABS-8206-7	20"x12" 718'-3"	Rotary	12-4-80	"	Vault

PUMPING EQUIPMENT:			
Well	D.W.T./Vac.	Actual Rated Capacity (GPM)	Auth. Capacity (GPM)
No.			
1	D.W.T.	1300	1400
2	D.W.T.	1400	1400
3	D.W.T.	1300	1300

CHEMICAL TREATMENT:
Lime (For Corrosion Control) Yes
Calgon Added for Iron Inhibition
Chlorination Type: Hypochlorinator

REMARKS:
Deep Test Boring Located on Site - S-54155T.

REMARKS:

Deep Test Boring Located on Site (S-56423T).

EAST FORKS ROAD WELL FIELD & PUMPING STATION

Location: North Side of Connecticut Ave., Between East Forks Road & Illinois Aves., North Bay Shore

Plot Plan Drawing No.: BS-1025-2

STATION DATA

Area of Site: 9.45 Acres
Type of Structure: Brick & Concrete Block
Telemetry: Yes

Standby Diesel Generator Installed: 350 KW
Fence Enclosure Type: Chain Link

WELL DATA

S.C.W.A. Well No.	D.E.C. Well No.	W.S.A. No.	Decision Date	Well Dwg. No.	Dia.	Depth	Type	Date in Service	Status	Type of Structure	Remarks
1	S-13534	2710	3-1-55	BS-1025-18	16"	119'-4"	Rotary	7-26-55	Permanent	In Bldg.	OUT OF SERVICE
2	S-16176	3266	8-1-57	ZA-137-2	16"	117'-0"	"	6-30-58	"	Vault	
3	S-18566	3745	1-5-60	ZA-408-3	16"x12"	376'-1"	"	3-7-61	"	"	See Note Below
4	S-38192	5264	7-31-70	ABS-5072-8	20"x12"	306'-2"	"	2-29-72	"	"	
5	S-71083	7141	4-27-81	ABS-8738-7	20"x12"	800'-3"	"	6-23-84	"	"	

PUMPING EQUIPMENT

Well No.	D.W.T./Vac.	Actual Rated Capacity(GPM)	Authorized Capacity(GPM)
1	D.W.T.	900	900
2	D.W.T.	900	1000
3	D.W.T.	1000	1000
4	D.W.T.	1200	1200
5	D.W.T.	1300	1300

CHEMICAL TREATMENT

Lime (For Corrosion Control) Yes
Calgon (For Iron Inhibition) Yes
Chlorination Type: Permanent Gas

REMARKS

Deep Test Boring Located on Site - S-38192T.
NOTE: Installed Screen Liner (1-27-77).

EMJAY BOULEVARD WELL FIELD & PUMPING STATION

Location: North side of Emjay Boulevard, 150'± west of
Eisenhower Avenue, Pine Aire

Plot Plan Drawing No.: ZA-1305-1

STATION DATA

Area of Site: 4.519 Acres
Type of Structure: Brick & Concrete Block
Telemetry: Yes

Standby Diesel Generator Set Installed: 125 KW
Fence Enclosure Type: Chain Link

WELL DATA

S.C.W.A. Well No.	D.E.C.. Well No.	W.S.A. No.	Decision Date	Well Dwg. No.	Dia.	Depth	Type	Date in Service	Status	Type of Structure	Remarks
1	S-23445	4739	9-3-64	ZA-1305-22	16"x12"	607'-7"	Rotary	8-26-65	Permanent	In Bldg.	
2	S-31104	5373	7-20-67	ABS-3792-6	" "	659'-8"	"	3-12-68	"	Vault	
3	S-57008	6593	11-10-75	ABS-7346-8	20"x12"	634'-4½"	"	12-13-76	"	Vault	

PUMPING EQUIPMENT

Well No.	D.W.T./Vac.	Actual Rated Capacity(GPM)	Authorized Capacity(GPM)
1	D.W.T.	1200	1200
2	D.W.T.	1200	1200
3	D.W.T.	1400	2400

CHEMICAL TREATMENT

Lime (For Corrosion Control) Yes

Chlorination Type: Hypochlorinator

REMARKS

750,000 Gal. Elevated Tank Located on Site
Deep Test Boring Located on Site.

AUGUST ROAD WELL FIELD AND PUMPING STATION

Location: N/S of August Road W/O Deer Park
Avenue, North Babylon

Plot Plan Drawing No.: BL-725-2

Station Data:

Area of Site: 6.5 Acres

Type of Structure: Brick

Telemetry: Yes

Standby Diesel Generator Set Installed: 125 KW

Fence Enclosure Type: Chain Link

WELL DATA:

S.C.W.A. Well No.	D.E.C. Well No.	W.S.A. No.	Decision Date	Well Dwg. No.	Dia.	Depth	Type	Date in Service	Status Out of Service	Type of Structure	Remarks
1	S-12710	2644	12-14-54	BL-725-19	16"	70'-1 5/8"	Rotary	6-16-55	Service	In Bldg.	
2	S-16256	3417	5-6-58	BL-952-2	16"x12"	600'	"	12-10-58	Permanent	Conc.Vault	
3	S-20635	4138	2-1-62	BL-1366-5	16"x12"	627'-4 7/8"	"	6-19-62	"	S & S*	
4	S-37861	5843	7-17-70	ABL-5071-7	20"x12"	636'-1 3/8"	"	7-16-71	"	Conc.Vault	

PUMPING EQUIPMENT:

Well No.	D.W.T./Vac.	Actual Rated Capacity(GPM)	Auth. Capacity(GPM)
1	D.W.T.	1000	1000
2	D.W.T.	1000	1000
3	D.W.T.	1100	1200
4	D.W.T.	1100	1200

CHEMICAL TREATMENT:

Lime (For Corrosion Control) Yes
Calgon (For Iron Inhibition) Yes
Chlorination Type Permanent Gas Installation

REMARKS:

* S & S Underground Substructure & Prefabricated Superstructure

REFERENCE NO. 10

H2M GROUP

Holzmaacher, McLendon and Murrell, P.C. • H2M/Ragold, Inc. • H2M Labs, Inc.

575 Broad Hollow Road, Melville, N.Y. 11747-5076

(516) 756-8000 • (201) 575-5400

August 25, 1987

NUS Corporation
1090 King Georges Post Road
Suite 1103
Edison, New Jersey 08837

Attention: Mr. E. L. Leonard

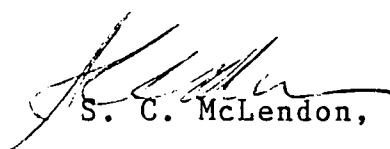
Gentlemen:

The Dix Hills Water District has asked us to respond to your August 11, 1987 letter.

- (1) We have shown the location of Plants 8 and 10 on your Hagstrom map plan. These are the only 2 well plants within or almost within your 3 mile area.
- (2) Well No. 8-1 is New York State Department of Environmental Conservation #S34022, is 490 feet deep and in a buried valley of the Glacial formation.
- (3) Well No. 10 is NYSDEC #S72060, is 600 feet deep and in the Magothy formation.
- (4) These two wells are part of a 15 well system. Total population served is 30,000.
- (5) Two (2) of the other 13 wells have experienced some dichloropropane contamination, but not enough to close them and GAC treatment has been installed.

Yours very truly,

HOLZMACHER, McLENDON & MURRELL, P.C.


S. C. McLendon, P.E.

SCM:mo

cc: J. A. Hartman, P.E.
B. J. Bletsch, P.E.

REFERENCE NO. 11

BRENTWOOD WATER DISTRICT

TOWN OF ISLIP

51 THIRD AVENUE P. O. BOX 2
BRENTWOOD, NEW YORK 11717

RECEIVED

August 17, 1987

AUG 24 1987

NUS CORPORATION
REGION II

SENT TO _____

Mr. E. L. Leonard
NUS Corporation
1090 King Georges Post Road
Suite 1103
Edison, New Jersey 08837

Dear Mr. Leonard:

As per your request, here is the information on Brentwood Water District public supply wells.

#1 Active Public Supply # S43008 -

Brentwood Water District- #1-4

Location - 51 Third Avenue, Brentwood, N.Y. 11717

Depth - 750' - Casing 20' - G.P.M. 1400 - Magothy

Aquifer - Population served w/other wells - 25,000

#2 Active Public Supply #S24846

Brentwood Water District- #1-3

Location - Same

Depth - 550' - Casing 20' - G.P.M. 1200 - Magothy

Aquifer - Population served - same

ON SAME SITE

Inactive wells - # S-62 - Brentwood Water District #1-1

S-61 - " " " 1-2

S-62 Closed & Sealed - 8/84 - Petroleum Intrusion

S-61 Closed & Sealed - 9/85 - Petroleum Intrusion

Very truly yours,

BRENTWOOD WATER DISTRICT

William J. Brandow, Supt.

REFERENCE NO. 12

I

COMMERCIAL ENVELOPE CO.

LATITUDE 40:45:38 LONGITUDE 73:17:53

1980 POPULATION

KM	0.00-.400	.400-.810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
S 1	0	944	8048	38368	63909	85002	196271
RING TOTALS	0	944	8048	38368	63909	85002	196271

I

COMMERCIAL ENVELOPE CO.

LATITUDE 40:45:38 LONGITUDE 73:17:53

1980 HOUSING

KM	0.00-.400	.400-.810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
S 1	0	393	2155	10787	16710	23818	53863
RING TOTALS	0	393	2155	10787	16710	23818	53863

Miles

	$\frac{1}{4}$	$\frac{1}{2}$	1	2	3	4
Population	0	944	8,992	47,360	111,269	196,271
Housing	0	393	2548	13,535	30,045	53,863

REFERENCE NO. 13

New York

40072-A1-EI-250

N. Y.—CONN.—N. J.

1:250 000-scale map of Atlantic Coast Ecological Inventory



Produced by
U. S. FISH AND WILDLIFE
SERVICE
1980

AQUATIC ORGANISMS

Shown in BLUE; species with special status shown in RED-(F) or (S) indicates species protected by Federal or State Legislation (see text)

SYMBOL

SPECIES

PLANTS (1-50)

- 1 Irish moss
- 2 Rockweed

INVERTEBRATES (51-100)

- 51 Crabs
- 52 Mussels
- 53 Oysters
- 54 Scallops
- 55 Clams
- 56 Worms
- 57 Shrimp
- 58 American lobster
- 59 Blue crab
- 60 Eastern oyster
- 61 European oyster
- 62 Bay scallop
- 63 Deep-sea scallop
- 64 Calico scallop
- 65 Surf clam
- 66 Hard clam
- 67 Soft shell clam
- 68 Brackish-water clam
- 69 Bloodworm
- 70 Sandworm
- 71 White shrimp
- 72 Brown shrimp
- 73 Northern shrimp
- 74 Rock crab
- 75 Jonah crab
- 76 Whelk
- 77 Ocean quahog
- 78 Pink shrimp
- 79 Stone crab
- 80 Spiny lobster

FISH (101-200)

- 101 Sharks, skates, rays
- 102 Herring
- 103 Salmon and trout
- 104 Catfish
- 105 Cod
- 106 Sunfish and bass
- 107 Drum
- 108 Flatfish
- 109 Longnose gar
- 110 Shortnose sturgeon (F)
- 111 Atlantic sturgeon (S)
- 112 American eel
- 113 Blueback herring
- 114 Hickory shad
- 115 Alewife
- 116 American shad (S)
- 117 Atlantic menhaden
- 118 Atlantic herring
- 119 Gizzard shad
- 120 Tarpon
- 121 Atlantic salmon
- 122 White catfish
- 123 Channel catfish
- 124 Yellow bullhead
- 125 Brown bullhead
- 126 Flat bullhead
- 127 Sea catfish
- 128 White perch
- 129 Striped bass
- 130 Black sea bass
- 131 Redbreast sunfish
- 132 Warmouth
- 133 Bluegill
- 134 Largemouth bass
- 135 Black crappie
- 136 Sheepshead
- 137 Spotted seatrout
- 138 Weakfish
- 139 Spot
- 140 Atlantic croaker
- 141 Southern kingfish
- 142 Northern kingfish
- 143 Gulf kingfish
- 144 Red drum
- 145 Star drum
- 146 Black drum
- 147 Summer flounder
- 148 Southern flounder
- 149 Winter flounder
- 150 Rainbow smelt
- 151 Atlantic tomcod
- 152 Threadfin shad
- 153 Carp
- 154 Atlantic mackerel
- 155 Chain pickerel
- 156 White bass
- 157 Northern puffer
- 158 Silver perch
- 159 Florida pompano
- 160 Bluefish
- 161 Spanish mackerel
- 162 Cobia

- 163 Mullet
- 164 White crappie
- 165 Redear sunfish
- 166 Smallmouth bass
- 167 Yellow perch
- 168 Pumpkinseed
- 169 Atlantic halibut
- 170 Atlantic cod
- 171 Pollock
- 172 Haddock
- 173 Hake
- 174 Bluefin tuna
- 175 Walleye
- 176 Northern pike
- 177 Scup
- 178 Tautog
- 179 Atlantic spadefish
- 180 Bay anchovy
- 181 Butterfish
- 182 Little tunny
- 183 Atlantic bonito
- 184 Brown trout
- 185 Cunner
- 186 Yellowtail flounder
- 187 Gulf flounder
- 188 Pinfish
- 189 King mackerel
- 190 Pigfish
- 191 White grunt
- 192 Tripletail
- 193 Ladyfish
- 194 Snook
- 195 Jack
- 196 Snapper
- 197 Grouper
- 198 Sailfish
- 199 Great barracuda
- 200 Maryland darter (F)

REPTILES AND AMPHIBIANS (201-250)

- 201 Green sea turtle (F)
- 202 Loggerhead sea turtle (F)
- 203 Hawksbill turtle (F)
- 204 Atlantic ridley turtle (F)
- 205 Leatherback turtle (F)

MAMMALS (251-300)

- 251 Florida manatee (F)
- 252 Atlantic bottlenose dolphin
- 253 Pigmy sperm whale
- 254 Short-finned pilot whale
- 255 Harbor seal
- 256 Gray seal
- 257 Right whale (F)
- 258 Atlantic spotted dolphin

TERRESTRIAL ORGANISMS

Shown in BROWN; species with special status shown in RED-(F) or (S) indicates species protected by Federal or State Legislation (see text)

SYMBOL

SPECIES

PLANTS (301-350)

- 301 Eastern hemlock
- 302 Spleenwort (S)
- 303 Spider lily (S)
- 304 Pond bush (S)
- 305 Watermilfoil (S)
- 306 Hooded pitcher plant (S)
- 307 Tree
- 308 Prickly pear cactus (S)
- 309 Trailing arbutus (S)
- 310 Eastern bumelia
- 311 Pitcher plant
- 312 Baldcypress
- 313 Redbay
- 314 Seaside alder
- 315 Box huckleberry
- 316 Purple fringeless orchid
- 317 Pink lady's slipper
- 318 Ebony spleenwort (S)
- 319 Orchids (S)
- 320 Golden club (S)
- 321 Florida beargrass
- 322 East-coast coontie
- 323 Fall-flowering ixia
- 324 Jackson-vine
- 325 Spoon-flower
- 326 Curtiss milkweed
- 327 Sea lavender
- 328 Hand fern
- 329 Needle palm
- 330 Yellow squirrel-banana
- 331 Beach creeper
- 332 Florida coontie
- 333 Four-petal pawpaw
- 334 Bird's nest spleenwort
- 335 Burrowing four-o'clock
- 336 Beach star
- 337 Silver palm
- 338 Dancing lady orchid
- 339 Tamarindillo
- 340 Fuch's bromeliad
- 341 Everglades peperomia
- 342 Buccaneer palm
- 343 Slender spleenwort
- 344 Pineland jacquemontia
- 345 Mahogany mistletoe
- 346 Florida thatch
- 347 Twisted air plant
- 348 Long's bittercress
- 349 Venus's flytrap

INVERTEBRATES (351-400)

- 351 Monarch butterfly
- 352 Zebra butterfly

BIRDS (401-600)

SHOREBIRDS (401-430)

- 401 Shorebirds
- 402 Terns
- 403 Gulls
- 404 Forster's tern
- 405 Arctic tern
- 406 Least tern (S)
- 407 Roseate tern (S)
- 408 Common tern
- 409 Great black-backed gull
- 410 Herring gull
- 411 Laughing gull
- 412 Black skimmer (S)
- 413 Turnstones
- 414 Plovers
- 415 Piping plover
- 416 American oystercatcher (S)

WADING BIRDS (431-460)

- 431 Wading birds
- 432 Herons
- 433 Egrets
- 434 Rails
- 435 Ibises
- 436 Bitterns
- 437 Great blue heron (S)
- 438 Wood ibis (S)
- 439 Anhinga
- 440 Little blue heron (S)
- 441 Yellow-crowned night heron (S)
- 442 Black-crowned night heron
- 443 Florida sandhill crane (S)
- 444 Louisiana heron (S)
- 445 Limpkin (S)
- 446 Roseate spoonbill (S)
- 447 Snowy egret (S)
- 448 Magnificent frigate-bird (S)
- 449 Reddish egret (S)
- 450 Clapper rail
- 451 King rail
- 452 Virginia rail
- 453 Sora rail

WATERFOWL (461-500)

- 461 Waterfowl
- 462 Swans
- 463 Geese
- 464 Dabbling ducks
- 465 Diving ducks
- 466 Common eider
- 467 Harlequin duck
- 468 Wood duck
- 469 Fulvous tree duck
- 470 Loons
- 471 Grebes
- 472 Brant geese
- 473 Snow goose
- 474 Gadwall
- 475 Black duck

RAPTORS (501-530)

- 501 Raptors
- 502 Owls
- 503 Kites
- 504 Hawks
- 505 Bald eagle (F)
- 506 Osprey (S)
- 507 Peregrine falcon (F)
- 508 Copper's hawk (S)
- 509 Swallow-tailed kite
- 510 Marsh hawk (S)
- 511 Southeastern American kestrel (S)
- 512 Florida burrowing owl (S)

SEABIRDS (531-550)

- 531 Seabirds
- 532 Petrels, shearwaters, and albatroses
- 533 Pelican and allies
- 534 Alcids
- 535 Brown pelican (F)
- 536 Black guillemot
- 537 Leach's petrel
- 538 Razorbill
- 539 Common puffin
- 540 Double-crested cormorant
- 541 Gannet
- 542 Wilson's petrel
- 543 Northern phalarope
- 544 Audubon's shearwater
- 545 Greater shearwater
- 546 Shearwaters
- 547 Petrels
- 548 Jaegers
- 549 White pelican

SONGBIRDS AND OTHERS (551-600)

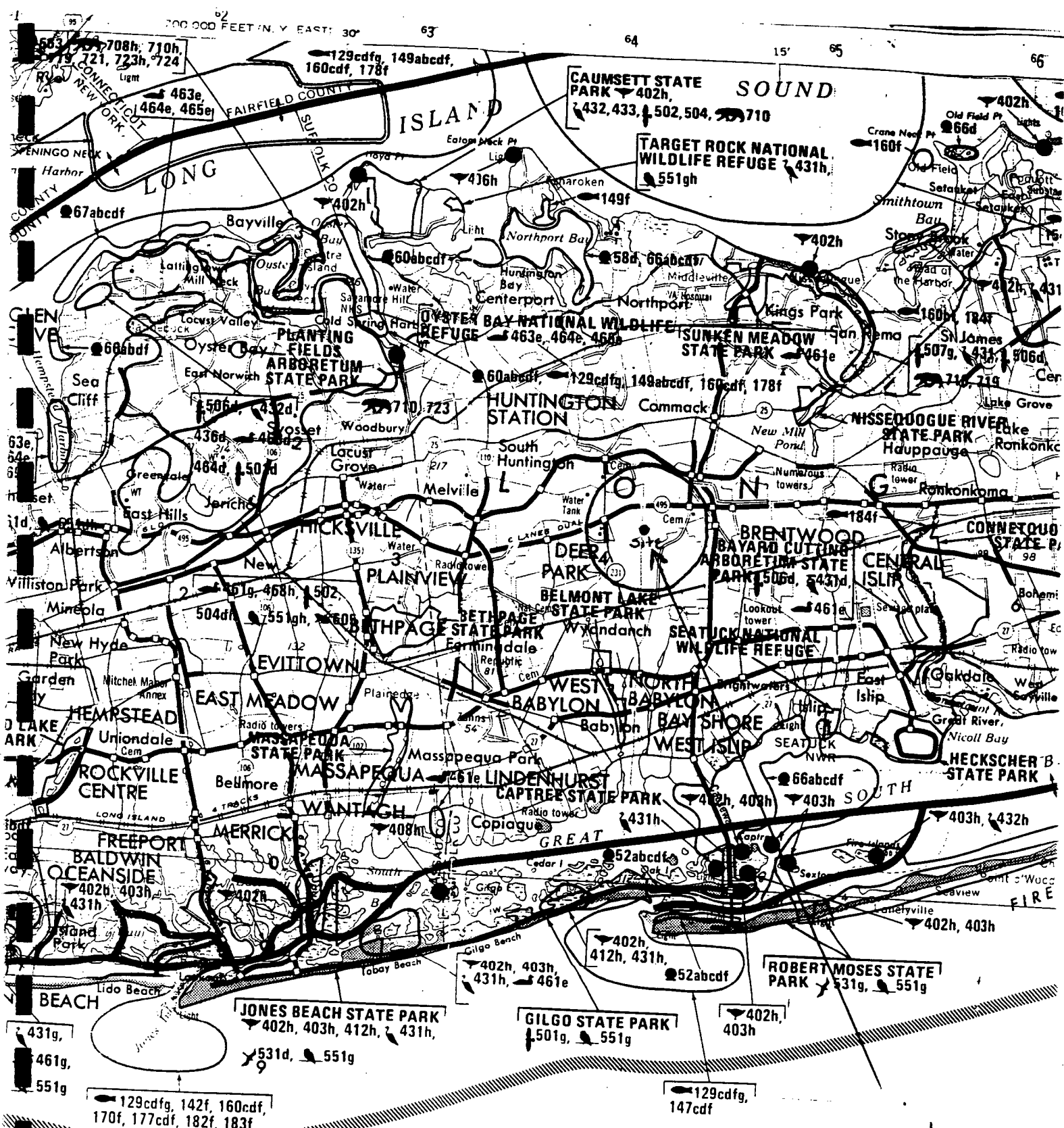
- 551 Songbirds and others
- 552 Red-cockaded woodpecker (F)
- 553 Chachalaca
- 554 Bachman's warbler (F)
- 555 Wild turkey
- 556 American woodcock
- 557 Pileated woodpecker
- 558 Swainson's warbler
- 559 Ruffed grouse
- 560 Bobwhite
- 561 Mourning dove
- 562 Warblers
- 563 Ring-necked pheasant
- 564 Bank swallow
- 565 Dusky seaside sparrow (F)
- 566 White-crowned pigeon (S)

REPTILES AND AMPHIBIANS (601-700)

- 601 Eastern narrow-mouthed toad (S)
- 602 Eastern indigo snake (F)
- 603 American alligator (F)
- 604 Northern diamondback terrapin
- 605 Amphibians
- 606 Greater siren
- 607 Bog turtle (S)
- 608 Gopher tortoise (S)
- 609 Eastern tiger salamander (S)
- 610 Northern fence lizard
- 611 Five-lined skink
- 612 Map turtle
- 613 Plymouth red-bellied turtle (F)
- 614 Eastern diamondback rattlesnake
- 615 Carolina gopher frog
- 616 Florida gopher frog (S)
- 617 Atlantic salt marsh watersnake (F)
- 618 American crocodile (F)
- 619 Florida Keys mole skink (S)
- 620 Florida black-headed snake (S)
- 621 Pine barrens tree frog (S)
- 622 Northern pine snake (S)
- 623 Corn snake (S)
- 624 Timber rattlesnake (S)
- 625 Southern gray tree frog (S)

MAMMALS (701-800)

- 701 Beaver
- 702 Whitetail deer
- 703 European fallow deer
- 704 Blackbeard Island deer
- 705 Opossum
- 706 Marsh rabbit
- 707 Rice rat
- 708 Raccoon
- 709 St. Simon Island raccoon
- 710 Mink
- 711 River otter (F)
- 712 Feral hog
- 713 Feral cow
- 714 Cumberland Island pocket gopher
- 715 Anastasia Island cotton mouse
- 716 Aquatic furbearers
- 717 Black bear (S)
- 718 Bobcat
- 719 Eastern gray squirrel
- 720 Eastern fox squirrel
- 721 Eastern cottontail
- 722 Delmarva fox squirrel (F)
- 723 Muskrat
- 724 Red fox
- 725 Bats
- 726 Gray fox
- 727 Striped skunk
- 728 Nutria
- 729 Longtail weasel
- 730 Colonial pocket gopher (S)
- 731 Wild ponies
- 732 Sika deer
- 733 Beach meadow vole
- 734 Block Island meadow vole
- 735 Pallid beach mouse (S)
- 736 Sherman's fox squirrel (S)
- 737 Florida mouse (S)
- 738 Florida panther (F)
- 739 Gulf's pocket gopher (S)
- 740 Key Largo wood rat (S)
- 741 Lower keys cotton rat (S)
- 742 Key Largo cotton mouse (S)



site
with 1 mi. radius

TRANSVERSE MERCATOR PROJECTION

BLACK NUMBERED LINES INDICATE THE 10,000 METER UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 18

FOR SALE BY U. S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092, OR DENVER, COLORADO 80225

REFERENCE NO. 14

SAMPLE CROSS - REFERENCE

<u>Sample I.D</u>	<u>Type</u>	<u>Organic Report #</u>	<u>Inorganic Report #</u>
NYS1-S1	Soil	BK376	MBE899
NYS1-S2	Soil	BK378	MBJ295
NYS1-GW1	Groundwater	BK399	MBK468
NYS1-GW2	Groundwater	BK400	MBK567
NYS1-GW3	Groundwater	BK501	MBK568
NYS1-TRBL1	Aqueous	BK397	N/A
	Trip Blank		
NYS1-TRBL2	Aqueous	BK398	N/A
	Trip Blank		
NYS1-RIN1	Aqueous	BK394	MBJ449
	Rinsate		
	Blank		
NYS1-RIN2	Aqueous	BK395	MBJ450
	Rinsate		
	Blank		

V1)
● NYS1-GW3

LEGEND:

- SOIL SAMPLE
- GROUNDWATER SAMPLE

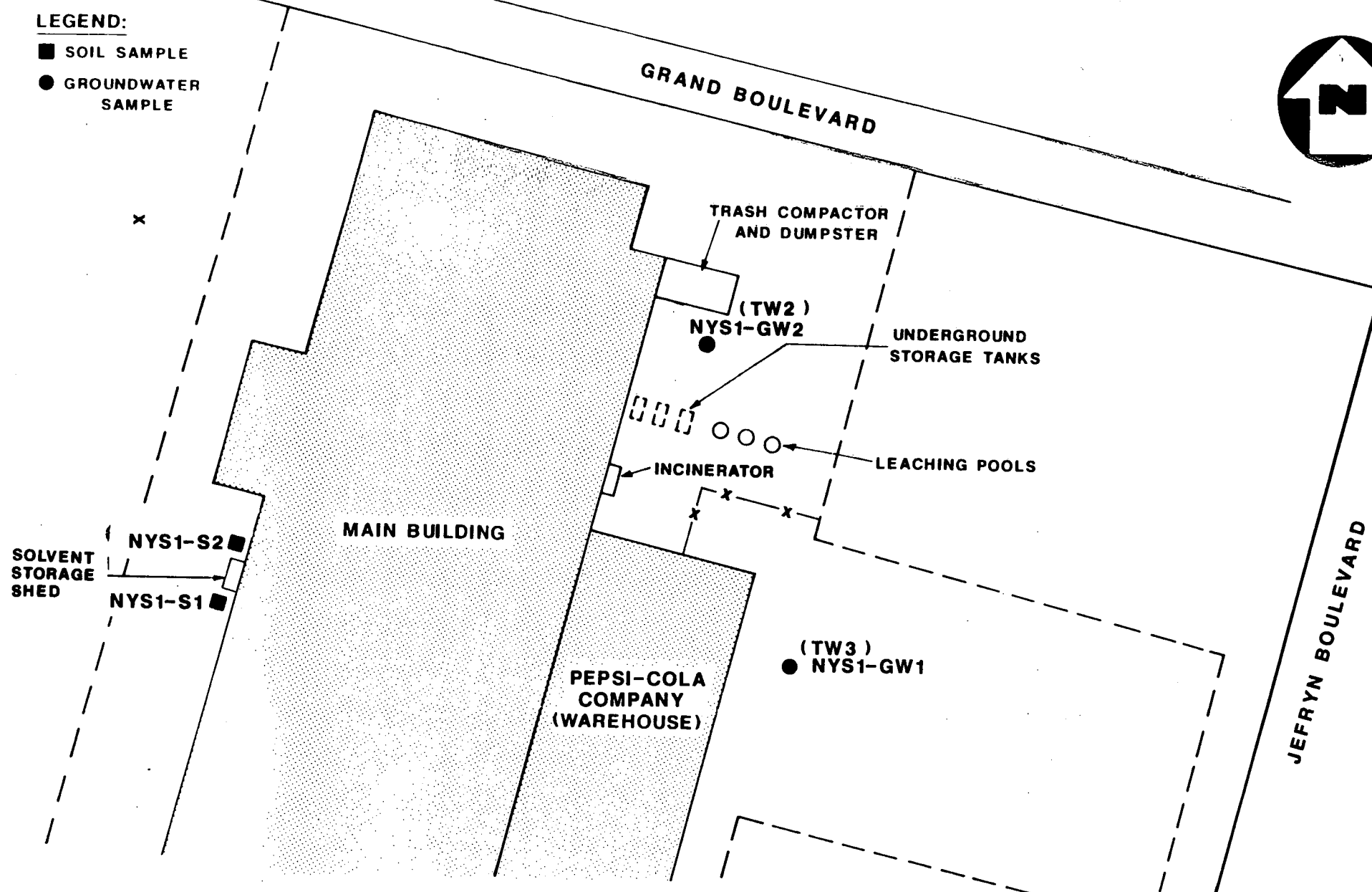


FIGURE 2

SAMPLE LOCATION MAP

COMMERCIAL ENVELOPE MFG. CO. INC., DEER PARK, N.Y.

(NOT TO SCALE)



ANALYTICAL DATA
NAME: COMMERCIAL ENVELOPE MFG. CO., INC.
DATE: 7/13/87
CASE NUMBER: 7610

200-1-83

VOLATILES

SAMPLE NUMBER	NYS1-S1	NYS1-S2	NYS1-GW1	NYS1-GW2	NYS1-GW3	NYS1-RIN1	NYS1-RIN2	NYS1-TB1	NYS1-TB2
TRAFFIC REPORT NUMBER	BK376	BK378	BK399	BK400	BK501	BK394	BK395	BK397	BK398
MATRIX	SOIL	SOIL	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	ug/kg	ug/kg	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Chloromethane									
Bromomethane									
Vinyl Chloride			7.9 J						
Chloroethane									
Methylene Chloride	Q	Q	Q	Q	Q	Q	Q	Q	44.0 B
Acetone	Q	Q	Q	Q	Q	Q	Q	Q	4.4 B
Carbon Disulfide									
1,1-Dichloroethene									
1,1-Dichloroethane									
Trans-1,2-Dichloroethene									
Chloroform									
1,2-Dichloroethane									
2-Butanone									
1,1,1-Trichloroethane			2.8 J		1.7 J				
Carbon Tetrachloride									
Vinyl Acetate									
Bromodichloromethane									
1,2-Dichloropropane									
Trans-1,3-Dichloropropene									
Trichloroethene									
Dibromochloromethane									
1,1,2-Trichloroethane									
Benzene									
cis-1,3-Dichloropropene									
2-Chloroethylvinylether									
Bromoform									
2-Hexanone									
4-Methyl-2-Pentanone									
Tetrachloroethene		6.3	1.5 J	1.9 J					
1,1,2,2-Tetrachloroethane									
Toluene						7.2	9.1	5.7	9.2
Chlorobenzene									
Ethylbenzene									
Styrene									
Total Xylenes									

NOTES TO ORGANICS DATA:

Blank space - compound analyzed for but not detected

Q - analysis did not pass EPA QA/QC requirements

J - compound present below contract-specified detection limits,
but above instrument detection limits

B - compound found in laboratory blank as well as the sample,
and indicates possible/probable blank contamination

E - value estimated due to laboratory interference

NR - analysis not required

ANALYTICAL DATA

NAME: COMMERCIAL ENVELOPE MFG. CO., INC.

DATE: 7/13/87

CASE NUMBER: 7610

SEMI-VOLATILES

SAMPLE NUMBER	NYS1-S1	NYS1-S2	NYS1-GW1	NYS1-GW2	NYS1-GW3	NYS1-RIN1	NYS1-RIN2
TRAFFIC REPORT NUMBER	BK376	BK378	BK399	BK400	BK501	BK394	BK395
MATRIX	SOIL	SOIL	WATER	WATER	WATER	WATER	WATER
UNITS	ug/kg	ug/kg	ug/L	ug/L	ug/L	ug/L	ug/L
2,4-Dinitrophenol							
4-Nitrophenol							
Dibenzofuran							
2,4-Dinitrotoluene							
2,6-Dinitrotoluene							
Diethylphthalate							
4-Chlorophenylphenyl ether							
Fluorene							
4-Nitroaniline							
4,6-Dinitro-2-Methylphenol							
N-Nitrosodiphenylamine							
4-Bromophenylphenyl ether							
Hexachlorobenzene							
Pentachlorophenol							
Phenanthrene							
Anthracene							
Di-n-Butylphthalate		Q	Q	Q	Q		
Fluoranthene							
Pyrene							
Butylbenzylphthalate							
3,3'-Dichlorobenzidine							
Benzo(a)Anthracene							
bis(2-Ethylhexyl)Phthalate							
Chrysene							
Di-n-Octyl Phthalate							
Benzo(b)Fluoranthene							
Benzo(k)Fluoranthene							
Benzo(a)Pyrene		Q					
Indeno(1,2,3-cd)Pyrene							
Dibenzo(a,h)Anthracene							
Benzo(g,h,i)Perylene							

NOTES TO ORGANICS DATA:

Blank space - compound analyzed for but not detected

Q - analysis did not pass EPA QA/QC requirements

J - compound present below contract-specified detection limits,
but above instrument detection limitsB - compound found in laboratory blank as well as the sample,
and indicates possible/probable blank contamination

E - value estimated due to laboratory interference

NR - analysis not required

ANALYTICAL DATA
NAME:COMMERCIAL ENVELOPE MFG.CO.,INC.
DATE:7/13/87
CASE NUMBER:7610

SEMI-VOLATILES

SAMPLE NUMBER	NYS1-S1	NYS1-S2	NYS1-GW1	NYS1-GW2	NYS1-GW3	NYS1-RIN1	NYS1-RIN2
TRAFFIC REPORT NUMBER	BK376	BK378	BK399	BK400	BK501	BK394	BK395
MATRIX	SOIL	SOIL	WATER	WATER	WATER	WATER	WATER
UNITS	ug/kg	ug/kg	ug/L	ug/L	ug/L	ug/L	ug/L
Phenol							
bis(2-Chloroethyl)Ether							
2-Chlorophenol							
1,3-Dichlorobenzene							
1,4-Dichlorobenzene							
Benzyl Alcohol							
1,2-Dichlorobenzene							
2-Methylphenol							
bis(2-Chloroisopropyl)Ether							
4-Methylphenol							
N-Nitroso-Di-n-Propylamine							
Hexachloroethane							
Nitrobenzene							
Isophorone							
2-Nitrophenol							
2,4-Dimethylphenol							
Benzoic Acid							
bis(2-Chloroethoxy)Methane							
2,4-Dichlorophenol							
1,2,4-Trichlorobenzene							
Naphthalene							
4-Chloroaniline							
Hexachlorobutadiene							
4-Chloro-3-Methylphenol							
2-Methylnaphthalene							
Hexachlorocyclopentadiene							
2,4,6-Trichlorophenol							
2,4,5-Trichlorophenol							
2-Chloronaphthalene							
2-Nitroaniline							
Dimethyl Phthalate							
Acenaphthylene							
3-Nitroaniline							
Acenaphthene							

ANALYTICAL DATA
NAME: COMMERCIAL ENVELOPE MFG. CO., INC.
DATE: 7/13/87
CASE NUMBER: 7610

INORGANICS

SAMPLE NUMBER	NYS1-S1	NYS1-S2	NYS1-GW1	NYS1-GW2	NYS1-GW3	NYS1-RIN1	NYS1-RIN2
TRAFFIC REPORT NUMBER	MBE899	MBJ295	MBK468	MBK567	MBK568	MBJ449	MBJ450
MATRIX	SOIL	SOIL	WATER	WATER	WATER	WATER	WATER
UNITS	mg/kg	mg/kg	ug/L	ug/L	ug/L	ug/L	ug/L
Aluminum	9820	6070	65000	38100	64600		
Antimony	[8.04] E						
Arsenic	5.20 E	4.48 E	74.9	19.0	29.7		
Barium	[13.8]	[11.4]	375	147	367		
Beryllium			6.4		[4.2]		
Cadmium	1.24		20.1	8.9	9.8		
Calcium	1300	2410	22200	23600	13500		
Chromium	10.8	8.78	104 E	87.4 E	142 E		
Cobalt	[4.42]	[3.45]	98.2	[25.5]	[49.2]		
Copper	Q	Q	Q	Q	Q	25.1	43.7
Iron	10900	7820	160000	63400	81200		130
Lead		53.4 E	152	33	548		
Magnesium	1300	[890]	12400	7580	12100		
Manganese	89.6	56.8	2650	832	5710		
Mercury		0.69			Q		0.52
Nickel	[4.36]	[1.76]	126 E	58.3 E	104 E		
Potassium	265	183	6790	13840	6530		
Selenium			Q	Q	Q	Q	Q
Silver	2.29			43.4			
Sodium			16500	23300	12200		
Thallium							
Vanadium	13.4	[7.21]	150 E	83.5 E	130 E		
Zinc	20.7	62.5	374	179	349	[15.5]	[15.1]

NOTES TO INORGANICS DATA:

Blank space - compound analyzed for but not detected

Q - analysis did not pass EPA QA/QC requirements

[] - compound present below contract-specified detection limits,
but above instrument detection limits

B - compound found in laboratory blank as well as the sample and
indicates possible/probable blank contamination

E - value estimated due to laboratory interference

NR - analysis not required

ANALYTICAL DATA
 NAME: COMMERCIAL ENVELOPE MFG.CO., INC.
 DATE: 7/13/87
 CASE NUMBER: 7610

PESTICIDES/PCBs

SAMPLE NUMBER	NYS1-S1	NYS1-S2	NYS1-GW1	NYS1-GW2	NYS1-GW3	NYS1-RIN1	NYS1-RIN2
TRAFFIC REPORT NUMBER	BK376	BK378	BK399	BK400	BK501	BK394	BK395
MATRIX	SOIL	SOIL	WATER	WATER	WATER	WATER	WATER
UNITS	ug/kg	ug/kg	ug/L	ug/L	ug/L	ug/L	ug/L
Alpha-BHC							
Beta-BHC							
Delta-BHC							
Gamma-BHC (Lindane)							
Heptachlor							
Aldrin							
Heptachlor Epoxide							
Endosulfan I							
Dieldrin							
4,4'-DDE							
Endrin							
Endosulfan II							
4,4'-DDD							
Endosulfan sulfate		110 J					
4,4'-DDT							
Methoxychlor							
Endrin Ketone							
Chlordane							
Toxaphene							
Aroclor-1016							
Aroclor-1221							
Aroclor-1232							
Aroclor-1242							
Aroclor-1248							
Aroclor-1254							
Aroclor-1260							

NOTES TO ORGANICS DATA:

Blank space - compound analyzed for but not detected

Q - analysis did not pass EPA QA/QC requirements

J - compound present below contract-specified detection limits,
 but above instrument detection limits

B - compound found in laboratory blank as well as the sample,
 and indicates possible/probable blank contamination

E - value estimated due to laboratory interference

NR - analysis not required

RECORD OF COMMUNICATION

☐ PHONE CALL

☐ OTHER (SPEC)

TO:

Leon Lazarus

FROM:

Carol Price DiGuardia

DATE

5/21/87

TIME

2:00 P.M.

SUBJECT

CLP Organic Data Packages for Quality Assurance Review

SUMMARY OF COMMUNICATION

The following data packages are in the DCR awaiting review by MMB:

SITE	CASE #/ SAS #	LABORATORY	ANALYSIS/ MATRIX	NUMBER OF SAMPLES	BLANK NUMBER(S)	DUPLICATE NUMBER(S)
Stampplate/ FIT-SI	7534	U.S. Testing	Organics		BK 386(TB)	BK 377
			Soil	5	BK 383(TB)	BK 388
			Water	5	BK 389(RinB)	
SCP/R3-Rem	7554	SAI	Organics		BL 404(FB)	None
			Soil	1	BL 405(TB)	
			Water	2		
Marathon Battery/ R3-Rem	7572	U.S. Testing	Organics		BK 714(TB)	None
			Soil	13	BK 713(FB)	
			Water	21	BK 355(TB)	
Brockway Motor Trucks/ FIT-SI	7570	SRI	Organics		BK 529(TB)	None
			Soil	3	BK 537(TB)	
			Water	7	BK 535(RinB)	
					BK 536(RinB)	
North Sea LF/R2-Rem	7574	WCAS	Organics		BK 422(FB)	None
			Soil	1		
			Water	1		

CONCLUSIONS, ACTION TAKEN OR REQUIRED

Commercial 7610	Nanco	Organics		BK 397(TB)	
Env. Manuf./		Soil	2	BK 398(TB)	
FIT-SI		Water	7	BK 394(RinB)	
				BK 395(RinB)	
Bell Aero- 3099B	Alliance	VOA, BNA	8	3099B-15	3099B-10
space/RCRA-		Water			3099B-14
EPA					

INFORMATION COPIES

TO:

File and Data Package

STANDARD OPERATING PROCEDURE

Page 28 of 43

Date: APR 18 1986

Number: HW-3

Revision: 2

File: Attachment 2 - CLP Data Assessment Checklist
Short Form (GC/MS Analysis)

SURVEILLANCE AND MONITORING BRANCH REVIEW

Project Name/Site: Commercial Env Manufacturing

Case Number: 7610

Type Investigation (Circle One): Remedial Site Other _____

Contract No.: 68-01-7102

Laboratory: Nanco

Sample Identification Numbers:

Aqueous: BK 399, BK 400, BK 501, BK 397, 398, BK 394, 395

Soil/Sediment: BK 376, 375

Superfund Account No.: 7TF4C 4922

Comments: _____

DR

STANDARD OPERATING PROCEDURE

Page 4 of 60

Title: Attachment 1 - CLP Data Assessment Checklist
(GC and GC/MS Analyses)

Date: 13 APR 1987

Number: HW-4

Revision: 1

SURVEILLANCE AND MONITORING BRANCH REVIEW

Project Name/Site: Commercial Envelope Manufacturing Co

Case Number: 7610

Type Investigation (Circle One): Remedial Site Other

Contract No.: 68-01-7102

Laboratory: Nanco Labs, Inc

Sample Identification Numbers:

Aqueous: BK 399, BK 400, BK 501, BK 397
BK 398, BK 394, BK 395

Soil/Sediment: BK 376, BK 378

Superfund Account No.: 8 TFA 02 P922

Comments:

Title: Attachment 4 - CLP Data Assessment Checklist
(GC and GC/MS Analysis)
DOCUMENTED RISK REVIEW

Date: 13 APR 1987
Number: HW-4
Revision: 1

CONTRACTOR AND MONITORING MANAGEMENT BRANCH REVIEW

PART I: Contractor and Preliminary Review

1.0 Data Completeness and Deliverables

1.1 Was SMO CCS checklist included with package?

YES	NO	N/A
<input checked="" type="checkbox"/>	—	—

I. COVER LETTER/NARRATIVE

2.0 Cover Letter/Case Narrative

2.1 Is the Narrative or Cover Letter present?

<input checked="" type="checkbox"/>	—	—
-------------------------------------	---	---

II. QC SUMMARY

3.0 Surrogate Percent Recovery Summaries (Form II)

3.1 Are the Surrogate Percent Recovery Summaries present for each of the following matrix:

a. Water

<input checked="" type="checkbox"/>	—	—
-------------------------------------	---	---

b. Soil

<input checked="" type="checkbox"/>	—	—
-------------------------------------	---	---

3.2 Are all the samples listed on the Surrogate Percent Recovery Summaries for each of the following matrix:

a. Water

<input checked="" type="checkbox"/>	—	—
-------------------------------------	---	---

b. Soil

<input checked="" type="checkbox"/>	—	—
-------------------------------------	---	---

3.3 Were outliers marked correctly with an asterisk?

<input checked="" type="checkbox"/>	—	—
-------------------------------------	---	---

CONTRACTOR ACTION: Circle all outliers in red.

3.4 Were two or more BN surrogates outside of contract specifications (or one surrogate less than 10% recovery for any samples?

—	<input checked="" type="checkbox"/>	—
---	-------------------------------------	---

Blanks?

—	<input checked="" type="checkbox"/>	—
---	-------------------------------------	---

If yes, were samples reanalyzed?

<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
--------------------------	---	-------------------------------------

Were blanks reanalyzed?

<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
--------------------------	---	-------------------------------------

Title: Attachment 4 - CLP Data Assessment Checklist
(GC and GC/MS Analysis)
Part I: Contractor and Preliminary Review
DOCUMENTED RISK REVIEW

Date: 13 APR 1987

Number: HW-4

Revision: 1

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
MMB ACTION: If initial analysis and reanalysis both have two or more surrogates outside of contract specifications (or one surrogate less than 10% recovery) for samples or blanks, reject all quantitation results, including detection limits.			
3.5 Were two or more acid surrogates outside of contract specifications (or one surrogate less than 10% recovery) for any samples?	—	<input checked="" type="checkbox"/>	—
Blanks?	—	<input checked="" type="checkbox"/>	—
If yes, were samples reanalyzed?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
Were blanks reanalyzed?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
MMB ACTION: If initial analysis and reanalysis both have two or more surrogates outside of contract specifications (or one surrogate less than 10% recovery) for samples or blanks, reject all quantitation results, including detection limits.			
3.6 Was one or more VOA surrogates outside of contract specifications for any samples?	—	<input type="checkbox"/>	—
Blanks?	—	<input checked="" type="checkbox"/>	—
If yes, were samples reanalyzed?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
Were blanks reanalyzed?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
MMB ACTION: If initial analysis and reanalysis both have one or more surrogates outside of contract specifications for samples or blanks, reject all quantitation results, including detection limits.			
3.7 Was pesticides/PCB surrogate outside of contract specifications for any samples?	—	<input checked="" type="checkbox"/>	—
Blanks?	—	<input checked="" type="checkbox"/>	—
MMB ACTION: If yes, for samples use professional judgment to determine acceptability of data.			

Title: Attachment 4 - CLP Data Assessment Checklist
(GC and GC/MS Analysis)
Part I: Contractor and Preliminary Review
DOCUMENTED RISK REVIEW

Date:
Number: HW-4
Revision: 1

4.0 Contamination (Reagent Blank Summary - Form IV)

YES NO N/A

4.1. Do any method/instrument/reagent blanks have positive results for:

VOA's?

☒ ☐ ☐

B/N?

☒ ☐ ☐

Acids?

☐ ☒ ☐

Pesticides?

☐ ☒ ☐

PCBs?

☐ ☒ ☐

(4.2 is not required for SI Data Packages)

4.2 Do any field/trip blanks have positive results for:

VOA's?

☒ ☐ ☐

B/N?

☐ ☒ ☐

Acids?

☐ ☒ ☐

Pesticides?

☐ ☒ ☐

PCBs?

☐ ☒ ☐

CONTRACTOR ACTION: Prepare a list of the samples associated with each of the contaminated and/or missing method blanks (attach a separate sheet).

MMB ACTION: For common VOA blank contaminants found (e.g., methylene chloride, acetone, toluene and 2-butanone) reject (red-line) all associated positive results present at less than 10 times the blank contaminant levels; for all other contaminants reject (red-line) when all associated positive results are present at less than 5 times the blank contaminant levels. Do not reject any values reported with a "U" (detection limit values).

CONTRACTOR PREPARER _____

COMPLETION DATE _____

Title: Attachment 4 - CLP Data Assessment Checklist
(GC and GC/MS Analysis)
Part I: Contractor and Preliminary Review
DOCUMENTED RISK REVIEW

Date: 13 APR 1987
Number: HW-4
Revision: 1

III SAMPLE DATA

YES NO N/A

5.0 Are the Traffic Report Forms present for all samples?

[✓] — —

CONTRACTOR ACTION: List missing Traffic Reports on Missing Data Tracking Form. (See 1.1)

5.0 Organic Analysis Data

6.1 Are the four (4) Organic Analysis Data Sheets (VOA, BNA, Pesticides and Tentatively Identified Compounds) present for each of the following.

a. Samples and/or fractions as appropriate

[✓] — —

b. Matrix spikes and matrix spike duplicates

[] — [✓]

c. Blanks

[] — [✓]

CONTRACTOR ACTION: List Missing Data Sheets on Missing Data Tracking Form. (See 1.1)

CONTRACTOR ACTION: If no, list the missing numbers on the Missing Data Tracking Form (See 1.1)

7.0 Holding Times

7.1 Have any holding times from the date of collection been exceeded for:

a. Volatiles

Aqueous: aromatics (7 days)*

— [✓] —

non-aromatics (14 days)

— [✓] —

Soil/Sediment (10 days)?

— [✓] —

*14 days if preserved to pH <2.

b. NVOA's and Pesticides/PCBs:

Aqueous (5 days to extraction, 40 days after extraction)

— [✓] —

Soil/Sediment (10 days to extraction, 40 days after extraction)

— [✓] —

STANDARD OPERATING PROCEDURE

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Title: Attachment 4 - CLP Data Assessment Checklist
(GC and GC/MS Analysis)

Date: 13 APR 1987

Number: HW-4

Revision: 1

Part I: Contractor and Preliminary Review
DOCUMENTED RISK REVIEW

YES NO N/A

CONTRACTOR ACTION: List the samples and their respective
fractions with exceedances below.
(Attach additional sheets if necessary.)

Table of Holding Time Exceedances

<u>Sample</u>	<u>Sample Matrix</u>	<u>Fraction(s)</u>	<u>(See Traffic Report)</u>		<u>(See Form I)</u>	<u>(See Form I & Form V)</u>
			<u>Date Sampled</u>	<u>Date Lab Received</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

MMB ACTION: If these holding times are exceeded, red-
line all values on the data sheet (includ-
ing detection limits) indicating rejection.

Title: Attachment 4 - CLP Data Assessment Checklist
(GC and GC/MS Analysis)
PART II: MMB Review
DOCUMENTED RISK REVIEW

Date: 13 APR 1987

Number: HW-4

Revision: 1

<u>YES</u>	<u>NO</u>	<u>N/A</u>
------------	-----------	------------

III SAMPLE DATA PACKAGE1.0 Traffic Report

- 1.1 Do the Traffic Reports indicate any problems with sample receipt, condition of samples or special notations affecting the quality of the data?

—	[✓]	—
---	-----	---

MMB ACTION: Use professional judgment in evaluating any effect on the quality of the data.

2.0 Holding Times

- 2.1 Have all associated sample data which have exceeded holding times been red-lined on the data sheet (including detection limits) indicating rejection?

[]	—	✓
-----	---	---

MMB ACTION: Make any necessary corrections.

Title: Attachment 4 - CLP Data Assessment Checklist
(GC and GC/MS Analysis)
PART II: MMB Review
DOCUMENTED RISK REVIEW

Date: 13 APR 1987

Number: HW-4

Revision: 1

CASE # 7610 LAB Nanco Lab. Inc SITE Comm Env. Manuf

3.0 Conclusions: (NOTE: Reviewers must red-line unacceptable data on sample data sheets; red-line data does not imply the compound is not present) Only the MMB reviewer has the authority to red-line unacceptable data.

3.1 Data Assessment The following samples had
methylene chloride and acetone red-lined
(rejected) for since blank contamination:
BK 400, BK 501, BK 378, BK 399, BK 376
The following samples had di-n-butyl
phthalate red-lined (rejected) for method
blank contamination: BK 400, BK 501, BK 378, BK 399
The following samples had Benz(a)pyrene
and 1,2-Benzene dicarboxylic acid, bis (2 methyl-
propyl) ester red-lined (rejected) for method
blank contamination: BK 378
TIC compound in BK 400, BK 501, BK 395 and BK 394
also present in Method Blank, but not flagged with B

3.2 Contract Problems/Non-compliance Identification of this
compound is questionable and should be
called an unknown.

3.3 Contractor Review Problems/Errors

Reviewer's Signature:

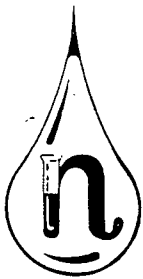
Donald G. WrightDate: 11/13/87

Verified By:

[Signature]

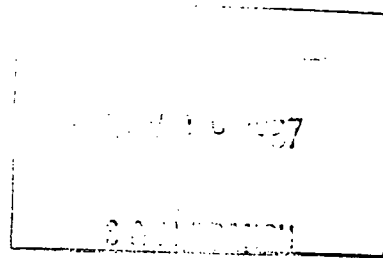
Date:

11/16/87



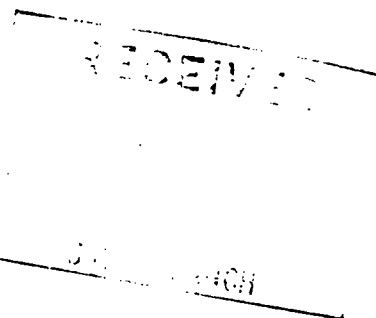
nanco labs, inc.

*Commercial
Envelope*



August 13, 1987

*~~Kennerly~~
AVEREE*



Ms. Doris Ling
USEPA - CLP
Sample Management Office
209 Madison Street, Suite 200
Alexandria, Virginia 22314

Re: EPA Case #7610

Dear Ms. Ling:

Enclosed are Form V, Tune File, Mass Spectra, Initial Calibration Data, Quant and Spectra for GC/MS D on July 21, 1987. The data was inadvertently omitted from the QC Summary, Raw QC and Standard Data Package for this case (7610).

I am sorry for any inconvenience this might have caused you. Please feel free to contact me with any further questions.

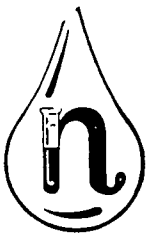
Sincerely,

Sohail Jahani
Organics Manager

cc: EMSL-LV
USEPA Region II

enclosures

SJ:plg



nanco labs, inc.

July 31, 1987

CASE NARRATIVE Prepared for: USEPA REGION II

CASE NUMBER: 7610

CONTRACT NUMBER: 68-01-7102

ORGANIC ANALYSIS

Case 7610 was received at Nanco Labs, Inc. on July 14, 1987. It consisted of five (5) water samples for full analysis, two (2) water for VOA only, and two (2) soil samples. Soil sample BK-378 was low level for VOA and medium level for BN/A and Pesticide fraction. Soil sample BK-376 was low level.

[Please note GPC has been done for all soils Pesticide fraction and no GPC for all BN/A fraction]

Water sample BK-399 was chosen for VOA, BN/A and pesticide QC, while soil sample BK-376 was chosen for low level Pesticide, BN/A and VOA QC, and Medium level soil sample BK-378 was chosen for BN/A and Pesticide QC (i.e., matrix spike and matrix spike duplicate).

The presence of Benzo (a) pyrene has been reported in the Blank. Although the compound meets all the identification criteria we believe this is in fact Perylene. This has been found to be a contaminant resulting from the undeuterated form of Perylene d12 (Internal Standard).

Due to occasional problems with intergration in our Hewlett Packard GC/MS system you may find some areas and concentrations in our data corrected and handwritten by our analysts.

The CRDL listed on form IV (Reagent Blank Summary) is the CRDL listed in the section C of the Protocol. The dilution/concentration factors are not taken into account.



nanco labs, inc.

July 31, 1987

Page 2

Case Narrative Prepared for : REGION II

NANCO PROCEDURES

All files beginning with >A were run on GC/MS A and all files beginning with >B were run on GC/MS B. All files beginning with >C were run on GC/MS C, all files beginning with >D were run on GC/MS D, all files beginning with >E were run on GC/MS E, and all files beginning with >F were run on GC/MS F.

Some Tentatively Identified Compounds may show less than three "hits" or possibly zero "hits" for the results of the library search. This is due to the algorithm of the Hewlett Packard system we are using. Only data base entries of a probability of greater than one percent (1%) will be reported.

SURROGATE RECOVERIES

All surrogate recoveries are within specification, with the exception of a few surrogates in VOA fraction for sample BK-399 MSD. There is no need for reextraction because it happened on a MSD sample and there is a MS of this sample.

MATRIX SPIKE RECOVERIES

Most spikes and RPD,s are within specification. The exceptions are due to matrix interference and are noted on Form III. It should be noted that these limits are advisory only.

SAMPLE CONDITION

All samples arrived in good condition.

This case ran without problems.

Sohail Jahani
Organics Manager

SJ:plg

(PAGE 1)

SAMPLE NUMBE

Lab Sample ID No: >A1639

Sample Matrix: SOIL

Data Release Authorized By:

Case No: 7610

QC Report No:124

Contract No:68-01-7102

Date Sample Received: 07/14/87

BK-376

VOLATILE COMPOUNDS

Concentration:

Low

Medium

(Circle One)

Date Extracted/Prepared: 07/15/87

Date Analyzed: 07/15/87

Conc/Dil Factor:

1

pH: 7.4

Percent Moisture: 12

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE

If the result is a value greater than or equal to the detection limit, report the value.

U

Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U(e.g.10U based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected.The number is the minimum attainable detection limit for the sample.

1

Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 11 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C

This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides greater than or equal to 10 ng/ul in the final extract should be confirmed by GC/MS.

B

This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER

Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ORGANIC ANALYSIS DATA SHEET

(PAGE 2)

LABORATORY NAME: NANCO LABS. INC.
CASE NO: 7610

SAMPLE NO.
BK-376

SEMIVOLATILE COMPOUNDS

Concentration: Low Medium

(Circle One)

Date Extracted/Prepared: 07/17/87

Date Analyzed: 07/28/87

Conc/Dil Factor:----->

1

Percent Moisture: 12

GPC Cleanup: Yes No

Separatory Funnel Extraction: Yes

Continuous Liquid - Liquid Extraction: Yes

CAS Number		ug/l or ug/Kg (Circle One)	CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	330.0 U	83-32-9	Acenaphthene	330.0 U
111-44-4	bis(-2-Chloroethyl)Ether	330.0 U	51-28-5	2,4-Dinitrophenol	1600.0 U
95-57-8	2-Chlorophenol	330.0 U	100-02-7	4-Nitrophenol	1600.0 U
541-73-1	1,3-Dichlorobenzene	330.0 U	132-64-9	Dibenzofuran	330.0 U
106-46-7	1,4-Dichlorobenzene	330.0 U	121-14-2	2,4-Dinitrotoluene	330.0 U
100-51-6	Benzyl Alcohol	330.0 U	606-20-2	2,6-Dinitrotoluene	330.0 U
95-50-1	1,2-Dichlorobenzene	330.0 U	84-66-2	Diethylphthalate	330.0 U
95-48-7	2-Methylphenol	330.0 U	7005-72-3	4-Chlorophenyl-phenylether	330.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	330.0 U	86-75-7	Fluorene	330.0 U
106-44-5	4-Methylphenol	330.0 U	100-01-6	4-Nitroaniline	1600.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	330.0 U	534-52-1	4,6-Dinitro-2-Methylphenol	1600.0 U
67-72-1	Hexachloroethane	330.0 U	86-30-6	N-Nitrosodiphenylamine (1)	330.0 U
98-95-3	Nitrobenzene	330.0 U	101-55-3	4-Bromophenyl-phenylether	330.0 U
78-59-1	Isophorone	330.0 U	118-74-1	Hexachlorobenzene	330.0 U
88-75-5	2-Nitrophenol	330.0 U	87-86-5	Pentachlorophenol	1600.0 U
105-67-9	2,4-Dimethylphenol	330.0 U	85-01-8	Phenanthrene	330.0 U
65-85-0	Benzoic Acid	1600.0 U	120-12-7	Anthracene	330.0 U
111-91-1	bis(-2-Chloroethoxy)Methane	330.0 U	84-74-2	Di-n-Butylphthalate	330.0 U
120-83-2	2,4-Dichlorophenol	330.0 U	206-44-0	Fluoranthene	330.0 U
120-82-1	1,2,4-Trichlorobenzene	330.0 U	129-00-0	Pyrene	330.0 U
91-20-3	Naphthalene	330.0 U	85-68-7	Butylbenzylphthalate	330.0 U
106-47-8	4-Chloroaniline	330.0 U	91-94-1	3,3'-Dichlorobenzidine	660.0 U
87-68-3	Hexachlorobutadiene	330.0 U	56-55-3	Benzo(a)Anthracene	330.0 U
59-50-7	4-Chloro-3-Methylphenol	330.0 U	117-81-7	bis(2-Ethylhexyl)Phthalate	330.0 U
91-57-6	2-Methylnaphthalene	330.0 U	218-01-9	Chrysene	330.0 U
77-47-4	Hexachlorocyclopentadiene	330.0 U	117-84-0	Di-n-Octyl Phthalate	330.0 U
88-06-2	2,4,6-Trichlorophenol	330.0 U	205-99-2	Benzo(b)Fluoranthene	330.0 U
95-95-4	2,4,5-Trichlorophenol	1600.0 U	207-08-9	Benzo(k)Fluoranthene	330.0 U
91-58-7	2-Chloronaphthalene	330.0 U	50-32-8	Benzo(a)Pyrene	330.0 U
88-74-4	2-Nitroaniline	1600.0 U	193-39-5	Indeno(1,2,3-cd)Pyrene	330.0 U
131-11-3	Dimethyl Phthalate	330.0 U	53-70-3	Dibenz(a,h)Anthracene	330.0 U
208-96-8	Acenaphthylene	330.0 U	191-24-2	Benzo(g,h,i)Perylene	330.0 U
99-09-2	3-Nitroaniline	1600.0 U			

(1) - Cannot be separated from diphenylamine

ORGANICS ANALYSIS DATA SHEET

(PAGE 3)

LABORATORY NAME: NANCO LABS, INC.
CASE NO: 7610

SAMPLE NUMBER

BK-376-124

PESTICIDE/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 07/17/87

Date Analyzed: 08/03/87

Conc/Dil Factor: ----->

2

Percent Moisture: 12

GPC Cleanup: Yes X No

Separatory Funnel Extraction: Yes

Continuous Liquid-Liquid Extraction: Yes

CAS Number		ug/l or <u>ug/Kg</u> (Circle One)
319-84-6	Alpha-BHC	16.00 U
319-85-7	Beta-BHC	16.00 U
319-86-8	Delta-BHC	16.00 U
58-89-9	Gamma-BHC (Lindane)	16.00 U
76-44-8	Heptachlor	16.00 U
309-00-2	Aldrin	16.00 U
1024-57-3	Heptachlor Epoxide	16.00 U
959-98-8	Endosulfan I	16.00 U
60-57-1	Dieldrin	32.00 U
72-55-9	4,4'-DDE	32.00 U
72-20-8	Endrin	32.00 U
33213-65-9	Endosulfan II	32.00 U
72-54-8	4,4'-DDD	32.00 U
7421-93-4	Endrin Aldehyde	32.00 U
1031-07-8	Endosulfan Sulfate	32.00 U
50-29-3	4,4'-DDT	32.00 U
53494-70-5	Endrin Ketone	32.00 U
72-43-5	Methoxychlor	160.00 U
57-74-9	Chlordane	160.00 U
8001-35-2	Toxaphene	320.00 U
12674-11-2	Aroclor-1016	160.00 U
11104-28-2	Aroclor-1221	160.00 U
11141-16-5	Aroclor-1232	160.00 U
53469-21-9	Aroclor-1242	160.00 U
12672-29-6	Aroclor-1248	160.00 U
11097-69-1	Aroclor-1254	320.00 U
11096-82-5	Aroclor-1260	320.00 U

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs

30

or Ws

40000

Vt

Vi

3

ORGANICS ANALYSIS DATA SHEET

(PAGE 4)

LABORATORY NAME :NANCO LABS.INC.

CASE NO: 7610

SAMPLE NUMBER

BK-376

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/Kg)
1 125	METHANE, TRICHLOROFLUORO-	VOA	107	79.0 J
2 -----	UNKNOWN ALKANE	VOA	301	10.0 J
3 -----	ISOMER OF TRIMETHYL CYCLOHEXANE	VOA	343	11.0 J
4 -----	ISOMER OF TETRAMETHYL CHCLOHEXANE	VOA	433	38.0 J
5 -----	UNKNOWN	VOA	462	21.0 J
6 -----				
7 123422	2-PENTANONE, 4-HYDROXY-4-METHYL	BNA	76	16000.0 J
8 -----	UNKNOWN	BNA	250	1100.0 J
9 -----	ISOMER OF METHYL UNDECANE	BNA	811	1100.0 J
10 -----	UNKNOWN ALKANE	BNA	1329	1500.0 J
11 -----	UNKNOWN	BNA	1496	2300.0 J
12 -----	UNKNOWN	BNA	2584	2900.0 J
13 -----	UNKNOWN	BNA	1652	1500.0 J
14 -----	UNKNOWN	BNA	1655	5000.0 J
15 -----	UNKNOWN	BNA	1691	4400.0 J
16 -----	UNKNOWN	BNA	1737	2100.0 J
17 -----	UNKNOWN	BNA	1743	2100.0 J
18 -----	UNKNOWN	BNA	1776	1600.0 J
19 -----	UNKNOWN	BNA	1829	1800.0 J
20				
21				
22				
23				
24				
25				
26				

ORGANICS ANALYSIS DATA SHEET
(PAGE 1)

SAMPLE NUMBER

Laboratory Name: NANCO LABORATORY INC.
Lab Sample ID No: A1642
Sample Matrix: SOIL
Data Release Authorized By:

Case No: 7610
QC Report No: 124
Contract No: 68-01-7102
Date Sample Received: 07/14/87

BK-378

VOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 07/15/87
Date Analyzed: 07/15/87
Conc/Dil Factor: 1 pH: 7.5
Percent Moisture: 20

CAS Number	ug/l or ug/Kg (Circle One)	CAS Number	ug/l or ug/Kg (Circle One)
74-87-3 Chloromethane	10.0 U	79-34-5 1,1,2,2-Tetrachloroethane	5.0 U
74-83-9 Bromomethane	10.0 U	78-87-5 1,2-Dichloropropane	5.0 U
75-01-4 Vinyl Chloride	10.0 U	10061-02-6 Trans-1,3-Dichloropropene	5.0 U
75-00-3 Chloroethane	10.0 U	79-01-6 Trichloroethene	5.0 U
75-09-2 Methylene Chloride	9.6 U	124-48-1 Dibromochloromethane	5.0 U
67-64-1 Acetone	26.0 U	79-00-5 1,1,2-Trichloroethane	5.0 U
75-15-0 Carbon Disulfide	5.0 U	71-43-2 Benzene	5.0 U
75-35-4 1,1-Dichloroethene	5.0 U	10061-01-5 cis-1,3-Dichloropropene	5.0 U
75-34-3 1,1-Dichloroethane	5.0 U	110-75-8 2-Chloroethylvinylether	10.0 U
156-60-5 Trans-1,2-Dichloroethene	5.0 U	75-25-2 Bromoform	5.0 U
67-66-3 Chloroform	5.0 U	591-78-6 2-Hexanone	10.0 U
107-06-2 1,2-Dichloroethane	5.0 U	108-10-1 4-Methyl-2-Pentanone	10.0 U
78-93-3 2-Butanone	10.0 U	127-18-4 Tetrachloroethene	6.3
71-55-6 1,1,1-Trichloroethane	5.0 U	108-88-3 Toluene	5.0 U
56-23-5 Carbon Tetrachloride	5.0 U	108-90-7 Chlorobenzene	5.0 U
108-05-4 Vinyl Acetate	10.0 U	100-41-4 Ethylbenzene	5.0 U
75-27-4 Bromodichloromethane	5.0 U	100-42-5 Styrene	5.0 U
		Total Xylenes	5.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used.
Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE

the result is a value greater than or equal to the detection limit, report the value.

indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C

This flag applies to pesticide parameters where the identification has been confirmed by GC/MS Single component pesticides greater than or equal to 10 ng/ul in the final extract should be confirmed by GC/MS

B

This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER

Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ORGANIC ANALYSIS DATA SHEET

(PAGE 2)

MEDIUM LEVEL

LABORATORY NAME: NANCO LABS. INC.

CASE NO: 7610

SAMPLE NO.

BK-378

SEMIVOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 07/15/87

Date Analyzed: 07/28/87

Conc/Dil Factor:----->

1

Percent Moisture: 20

GPC Cleanup: Yes No

Separatory Funnel Extraction: Yes

Continuous Liquid - Liquid Extraction: Yes

CAS Number		ug/l or ug/Kg (Circle One)	CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	19800.0 U	83-32-9	Acenaphthene	19800.0 U
111-44-4	bis(-2-Chloroethyl)Ether	19800.0 U	51-28-5	2,4-Dinitrophenol	96000.0 U
95-57-8	2-Chlorophenol	19800.0 U	100-02-7	4-Nitrophenol	96000.0 U
541-73-1	1,3-Dichlorobenzene	19800.0 U	132-64-9	Dibenzofuran	19800.0 U
106-46-7	1,4-Dichlorobenzene	19800.0 U	121-14-2	2,4-Dinitrotoluene	19800.0 U
100-51-6	Benzyl Alcohol	19800.0 U	606-20-2	2,6-Dinitrotoluene	19800.0 U
95-50-1	1,2-Dichlorobenzene	19800.0 U	84-66-2	Diethylphthalate	19800.0 U
95-48-7	2-Methylphenol	19800.0 U	7005-72-3	4-Chlorophenyl-phenylether	19800.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	19800.0 U	86-73-7	Fluorene	19800.0 U
106-44-5	4-Methylphenol	19800.0 U	100-01-6	4-Nitroaniline	96000.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	19800.0 U	534-52-1	4,6-Dinitro-2-Methylphenol	96000.0 U
67-72-1	Hexachloroethane	19800.0 U	86-30-6	N-Nitrosodiphenylamine (1)	19800.0 U
98-95-3	Nitrobenzene	19800.0 U	101-55-3	4-Bromophenyl-phenylether	19800.0 U
78-59-1	Isophorone	19800.0 U	118-74-1	Hexachlorobenzene	19800.0 U
88-75-5	2-Nitrophenol	19800.0 U	87-86-5	Pentachlorophenol	96000.0 U
105-67-9	2,4-Dimethylphenol	19800.0 U	85-01-8	Phenanthrene	19800.0 U
65-85-0	Benzoic Acid	96000.0 U	120-12-7	Anthracene	19800.0 U
111-91-1	bis(-2-Chloroethoxy)Methane	19800.0 U	84-74-2	Di-n-Butylphthalate	19800.0 U
120-83-2	2,4-Dichlorophenol	19800.0 U	206-44-0	Fluoranthene	19800.0 U
120-82-1	1,2,4-Trichlorobenzene	19800.0 U	129-00-0	Pyrene	19800.0 U
91-20-3	Naphthalene	19800.0 U	85-68-7	Butylbenzylphthalate	19800.0 U
106-47-8	4-Chloroaniline	19800.0 U	91-94-1	3,3'-Dichlorobenzidine	39600.0 U
87-68-3	Hexachlorobutadiene	19800.0 U	56-55-3	Benzo(a)Anthracene	19800.0 U
59-50-7	4-Chloro-3-Methylphenol	19800.0 U	117-81-7	bis(2-Ethylhexyl)Phthalate	19800.0 U
91-57-6	2-Methylnaphthalene	19800.0 U	218-01-9	Chrysene	19800.0 U
77-47-4	Hexachlorocyclopentadiene	19800.0 U	117-84-0	Di-n-Octyl Phthalate	19800.0 U
88-06-2	2,4,6-Trichlorophenol	19800.0 U	205-99-2	Benzo(b)Fluoranthene	19800.0 U
95-95-4	2,4,5-Trichlorophenol	96000.0 U	207-08-9	Benzo(k)Fluoranthene	19800.0 U
91-58-7	2-Chloronaphthalene	19800.0 U	50-32-8	Benzo(a)Pyrene	9900.0 U
88-74-4	2-Nitroaniline	96000.0 U	193-39-5	Indeno(1,2,3-cd)Pyrene	19800.0 U
131-11-3	Dimethyl Phthalate	19800.0 U	53-70-3	Dibenz(a,h)Anthracene	19800.0 U
208-96-8	Acenaphthylene	19800.0 U	191-24-2	Benzo(g,h,i)Perylene	19800.0 U
99-09-2	3-Nitroaniline	96000.0 U			

(1) - Cannot be separated from diphenylamine

ORGANICS ANALYSIS DATA SHEET

(PAGE 3)

LABORATORY NAME: NANCO LABS, INC.

SAMPLE NUMBER

CASE NO: 7610

BK-378-124

PESTICIDE/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 07/23/87 7:15 PM pls

Date Analyzed: 08/03/87

Conc/Dil Factor: -----> 1

Percent Moisture: 20

GPC Cleanup: Yes X No Separatory Funnel Extraction: Yes X No Continuous Liquid-Liquid Extraction: Yes No

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	120.00 U
319-85-7	Beta-BHC	120.00 U
319-86-8	Delta-BHC	120.00 U
58-89-9	Gamma-BHC (Lindane)	120.00 U
76-44-8	Heptachlor	120.00 U
309-00-2	Aldrin	120.00 U
1024-57-3	Heptachlor Epoxide	120.00 U
959-98-8	Endosulfan I	120.00 U
60-57-1	Dieldrin	240.00 U
72-55-9	4,4'-DDE	240.00 U
72-20-8	Endrin	240.00 U
33213-65-9	Endosulfan II	240.00 U
72-54-8	4,4'-DDD	240.00 U
7421-93-4	Endrin Aldehyde	240.00 U
1031-07-8	Endosulfan Sulfate	110.00 J
50-29-3	4,4'-DDT	240.00 U
53494-70-5	Endrin Ketone	240.00 U
72-43-5	Methoxychlor	1200.00 U
57-74-9	Chlordane	1200.00 U
8001-35-2	Toxaphene	2400.00 U
12674-11-2	Aroclor-1016	1200.00 U
11104-28-2	Aroclor-1221	1200.00 U
11141-16-5	Aroclor-1232	1200.00 U
53469-21-9	Aroclor-1242	1200.00 U
12672-29-6	Aroclor-1248	1200.00 U
11097-69-1	Aroclor-1254	2400.00 U
11096-82-5	Aroclor-1260	2400.00 U

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs _____

or Ws

1

Vt

10000

Vi

3

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

LABORATORY NAME :NANCO LABS.INC.
CASE NO: 7610

SAMPLE NUMBER

BK-378

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimat Concentra (ug/l or
1	UNKNOWN ALKANE	VOA	302	
2 565753	PENTANE, 2,3,4-TRIMETHYL	VOA	310	
3	UNKNOWN ALKANE	VOA	342	
4	ISOMER OF 1-ETHYL-4-METHYL CYCLOHEXANE	VOA	363	
5	UNKNOWN	VOA	370	
6	ISOMER OF 1-ETHYL-4-METHYL CYCLOHEXANE	VOA	381	
7	UNKNOWN	VOA	392	
8	UNKNOWN	VOA	432	
9	UNKNOWN	VOA	461	
10	UNKNOWN ALKANE	VOA	505	
11				
12	UNKNOWN	BNA	194	
13	ISOMER OF CYCLOHEXANE	BNA	201	
14 111466	ETHANOL, 2,2-OXYBIS	BNA	236	2
15	ISOMER OF CYCLOHEXANE	BNA	279	
16	UNKNOWN ALKANE	BNA	286	1
17	UNKNOWN ALKENE	BNA	303	
18 493027	NAPHTHALENE, DECAHYDRO-TRANS	BNA	314	
19 112403	DODECANE	BNA	473	
20	UNKNOWN ALKANE	BNA	487	
21	UNKNOWN ALKENE	BNA	493	
22 62108252	DECANE, 2,6,7-TRIMETHYL	BNA	542	
23 112403	DODECANE	BNA	566	
24 0	DECANE, 2,3,5,8-TETRAMETHYL	BNA	704	
25 629992	PENTACOSANE	BNA	811	
26 84695	1,2-BENZENEDICARBOXYLIC ACID, BIS (2-METHYLPROPYL) ESTER	BNA	908	3
27 112958	EICOSANE	BNA	1359	
28 630024	OCTACOSANE	BNA	1408	
29 630068	HEXATRIACONTANE	BNA	1455	
30 544854	DOTRIACONTANE	BNA	1501	
31	UNKNOWN	BNA	1621	

SAMPLE NUMBER

Laboratory Name: NANTCO LABORATORY INC.
Lab Sample ID No: >F0343
Sample Matrix: WATER
Data Release Authorized By:

Case No: 7610
QC Report No:125
Contract No:68-01-7102
Date Sample Received:07/14/87

BK-394

VOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 07/15/87
Date Analyzed: 07/15/87
Conc/Dil Factor: 1 pH: 6.9
Percent Moisture: N/A

CAS Number	ug/l or ug/Kg (Circle One)	CAS Number	ug/l or ug/Kg (Circle One)
74-87-3 Chloromethane	10.0 U	79-34-5 1,1,2,2-Tetrachloroethane	5.0 U
75-83-9 Bromomethane	10.0 U	78-87-5 1,2-Dichloropropane	5.0 U
75-01-4 Vinyl Chloride	10.0 U	10061-02-6 Trans-1,3-Dichloropropene	5.0 U
75-00-3 Chloroethane	10.0 U	79-01-6 Trichloroethene	5.0 U
75-09-2 Methylene Chloride	4.3-38	124-48-1 Dibromochloromethane	5.0 U
66-64-1 Acetone	19.0-8	79-00-5 1,1,2-Trichloroethane	5.0 U
75-15-0 Carbon Disulfide	5.0 U	71-43-2 Benzene	5.0 U
75-35-4 1,1-Dichloroethene	5.0 U	10061-01-5 cis-1,3-Dichloropropene	5.0 U
75-34-3 1,1-Dichloroethane	5.0 U	110-75-8 2-Chloroethylvinylether	10.0 U
75-60-5 Trans-1,2-Dichloroethene	5.0 U	75-75-2 Bromoform	5.0 U
67-66-3 Chloroform	5.0 U	591-78-6 2-Hexanone	10.0 U
107-06-2 1,2-Dichloroethane	5.0 U	108-10-1 4-Methyl-2-Pentanone	10.0 U
93-3 2-Butanone	10.0 U	127-18-4 Tetrachloroethene	5.0 U
75-55-6 1,1,1-Trichloroethane	5.0 U	108-88-3 Toluene	7.2
56-23-5 Carbon Tetrachloride	5.0 U	108-90-7 Chlorobenzene	5.0 U
8-05-4 Vinyl Acetate	10.0 U	100-41-4 Ethylbenzene	5.0 U
75-27-4 Bromodichloromethane	5.0 U	100-42-5 Styrene	5.0 U
			Total Xylenes

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE

If the result is a value greater than or equal to the detection limit, report the value.

Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U(e.g.10U based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected.The number is the minimum attainable detection limit for the sample.

Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

This flag applies to pesticide parameters where the identification has been confirmed by GC/MS Single component pesticides greater than or equal to 10 ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER

Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ORGANIC ANALYSIS DATA SHEET

(PAGE 2)

LABORATORY NAME: NANCO LABS. INC.

CASE NO: 7610

SAMPLE NO.

BK-394

SEMIVOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 07/15/87

GPC Cleanup: Yes No

Date Analyzed: 07/23/87

Separatory Funnel Extraction: Yes

Conc/Dil Factor:----->

1

Continuous Liquid - Liquid Extraction: Yes

Percent Moisture: N/A

CAS Number		ug/l or ug/Kg (Circle One)	CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10.0 U	83-32-9	Acenaphthene	10.0 U
111-44-4	bis(-2-Chloroethyl)Ether	10.0 U	51-28-5	2,4-Dinitrophenol	50.0 U
95-57-8	2-Chlorophenol	10.0 U	100-02-7	4-Nitrophenol	50.0 U
541-73-1	1,3-Dichlorobenzene	10.0 U	132-64-9	Dibenzofuran	10.0 U
106-46-7	1,4-Dichlorobenzene	10.0 U	121-14-2	2,4-Dinitrotoluene	10.0 U
100-51-6	Benzyl Alcohol	10.0 U	606-20-2	2,6-Dinitrotoluene	10.0 U
95-50-1	1,2-Dichlorobenzene	10.0 U	84-66-2	Diethylphthalate	10.0 U
95-48-7	2-Methylphenol	10.0 U	7005-72-3	4-Chlorophenyl-phenylether	10.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	10.0 U	86-73-7	Fluorene	10.0 U
106-44-5	4-Methylphenol	10.0 U	100-01-6	4-Nitroaniline	50.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	10.0 U	534-52-1	4,6-Dinitro-2-Methylphenol	50.0 U
67-72-1	Hexachloroethane	10.0 U	86-30-6	N-Nitrosodiphenylamine (1)	10.0 U
98-95-3	Nitrobenzene	10.0 U	101-55-3	4-Bromophenyl-phenylether	10.0 U
78-59-1	Isophorone	10.0 U	118-74-1	Hexachlorobenzene	10.0 U
88-75-5	2-Nitrophenol	10.0 U	87-86-5	Pentachlorophenol	50.0 U
105-67-9	2,4-Dimethylphenol	10.0 U	85-01-8	Phenanthrene	10.0 U
65-85-0	Benzoic Acid	50.0 U	120-12-7	Anthracene	10.0 U
111-91-1	bis(-2-Chloroethoxy)Methane	10.0 U	84-74-2	Di-n-Butylphthalate	10.0 U
120-83-2	2,4-Dichlorophenol	10.0 U	206-44-0	Fluoranthene	10.0 U
120-82-1	1,2,4-Trichlorobenzene	10.0 U	129-00-0	Pyrene	10.0 U
91-20-3	Naphthalene	10.0 U	85-68-7	Butylbenzylphthalate	10.0 U
106-47-8	4-Chloroaniline	10.0 U	91-94-1	3,3'-Dichlorobenzidine	20.0 U
87-68-3	Hexachlorobutadiene	10.0 U	56-55-3	Benzo(a)Anthracene	10.0 U
59-50-7	4-Chloro-3-Methylphenol	10.0 U	117-81-7	bis(2-Ethylhexyl)Phthalate	10.0 U
91-57-6	2-Methylnaphthalene	10.0 U	218-01-9	Chrysene	10.0 U
77-47-4	Hexachlorocyclopentadiene	10.0 U	117-84-0	Di-n-Octyl Phthalate	10.0 U
88-06-2	2,4,6-Trichlorophenol	10.0 U	205-99-2	Benzo(b)Fluoranthene	10.0 U
95-95-4	2,4,5-Trichlorophenol	50.0 U	207-08-9	Benzo(k)Fluoranthene	10.0 U
91-58-7	2-Chloronaphthalene	10.0 U	50-32-8	Benzo(a)Pyrene	10.0 U
88-74-4	2-Nitroaniline	50.0 U	193-39-5	Indeno(1,2,3-cd)Pyrene	10.0 U
131-11-3	Dimethyl Phthalate	10.0 U	53-70-3	Dibenz(a,h)Anthracene	10.0 U
208-96-8	Acenaphthylene	10.0 U	191-24-2	Benzo(g,h,i)Perylene	10.0 U
99-09-2	3-Nitroaniline	50.0 U			

(1) - Cannot be separated from diphenylamine

ORGANICS ANALYSIS DATA SHEET

(PAGE 3)

SAMPLE NUMBER

LABORATORY NAME: NANCO LABS, INC.
CASE NO: 7610

BK 394

PESTICIDE/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 07-15-87
Date Analyzed: 07-25-87
Conc/Dil Factor: -----> 1
Percent Moisture: N/AGPC Cleanup: Yes___ No_X_
Separatory Funnel Extraction: Yes_X_
Continuous Liquid-Liquid Extraction: Yes___

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC (Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	Endrin Aldehyde	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
53494-70-5	Endrin Ketone	0.10 U
72-43-5	Methoxychlor	0.50 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1.00 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.00 U
11096-82-5	Aroclor-1260	1.00 U

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs 1000 or Ws Vt 10000 Vi 3

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

LABORATORY NAME :NANCO LABS.INC.
CASE NO: 7610

SAMPLE NUMBER

BK-394

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/Kg)
1	NONE FOUND	VOA		
2				
3				
4				
5				
6				
7	Z-9-OCTADECEN-1-01	BNA	1154	26.0 B
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

ORGANICS ANALYSIS DATA SHEET

(PAGE 1)

SAMPLE NUMBER

Laboratory Name: NANCO LABORATORY INC.

Lab Sample ID No: >F0344

Sample Matrix: WATER

Data Release Authorized By:

Case No: 7610

QC Report No: 125

Contract No: 68-01-7102

Date Sample Received: 07/14/87

BK-395

VOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 07/15/87

Date Analyzed: 07/15/87

Conc/Dil Factor: 1

pH: 5.6

Percent Moisture: N/A

CAS Number	ug/l or ug/Kg (Circle One)	CAS Number	ug/l or ug/Kg (Circle One)
74-87-3 Chloromethane	10.0 U	79-34-5 1,1,2,2-Tetrachloroethane	5.0 U
74-83-9 Bromomethane	10.0 U	78-87-5 1,2-Dichloropropane	5.0 U
75-01-4 Vinyl Chloride	10.0 U	10061-02-6 Trans-1,3-Dichloropropene	5.0 U
75-00-3 Chloroethane	10.0 U	79-01-6 Trichloroethene	5.0 U
75-09-2 Methylene Chloride	3.0 U	124-48-1 Dibromochloromethane	5.0 U
67-64-1 Acetone	37.0 U	79-00-5 1,1,2-Trichloroethane	5.0 U
75-15-0 Carbon Disulfide	5.0 U	71-43-2 Benzene	5.0 U
75-35-4 1,1-Dichloroethene	5.0 U	10061-01-5 cis-1,3-Dichloropropene	5.0 U
75-34-3 1,1-Dichloroethane	5.0 U	110-75-8 2-Chloroethylvinylether	10.0 U
156-60-5 Trans-1,2-Dichloroethene	5.0 U	75-25-2 Bromoform	5.0 U
67-66-3 Chloroform	5.0 U	591-78-6 2-Hexanone	10.0 U
107-06-2 1,2-Dichloroethane	5.0 U	108-10-1 4-Methyl-2-Pentanone	10.0 U
78-93-3 2-Butanone	10.0 U	127-18-4 Tetrachloroethene	5.0 U
71-55-6 1,1,1-Trichloroethane	5.0 U	108-88-3 Toluene	9.1
56-23-5 Carbon Tetrachloride	5.0 U	108-90-7 Chlorobenzene	5.0 U
108-05-4 Vinyl Acetate	10.0 U	100-41-4 Ethylbenzene	5.0 U
75-27-4 Bromodichloromethane	5.0 U	100-42-5 Styrene	5.0 U
		Total Xylenes	5.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used.

Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE

If the result is a value greater than or equal to the detection limit, report the value.

Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U)

Based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C

This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides greater than or equal to 10 ng/ul in the final extract should be confirmed by GC/MS

B

This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER

Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ORGANIC ANALYSIS DATA SHEET

(PAGE 2)

LABORATORY NAME: NANCO LABS. INC.
CASE NO: 7610SAMPLE NO.
BK-395

SEMIVOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 07/15/87
Date Analyzed: 07/23/87
Conc/Dil Factor:-----> 1
Percent Moisture: N/AGPC Cleanup: Yes No
Separatory Funnel Extraction: Yes
Continuous Liquid - Liquid Extraction: Yes

CAS Number		ug/l or ug/Kg (Circle One)	CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10.0 U	83-32-9	Acenaphthene	10.0 U
111-44-4	bis(-2-Chloroethyl)Ether	10.0 U	51-28-5	2,4-Dinitrophenol	50.0 U
95-57-8	2-Chlorophenol	10.0 U	100-02-7	4-Nitrophenol	50.0 U
541-73-1	1,3-Dichlorobenzene	10.0 U	132-64-9	Dibenzofuran	10.0 U
106-46-7	1,4-Dichlorobenzene	10.0 U	121-14-2	2,4-Dinitrotoluene	10.0 U
100-51-6	Benzyl Alcohol	10.0 U	606-20-2	2,6-Dinitrotoluene	10.0 U
95-50-1	1,2-Dichlorobenzene	10.0 U	84-66-2	Diethylphthalate	10.0 U
95-48-7	2-Methylphenol	10.0 U	7005-72-3	4-Chlorophenyl-phenylether	10.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	10.0 U	86-73-7	Fluorene	10.0 U
106-44-5	4-Methylphenol	10.0 U	100-01-6	4-Nitroaniline	50.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	10.0 U	534-52-1	4,6-Dinitro-2-Methylphenol	50.0 U
67-72-1	Hexachloroethane	10.0 U	86-30-6	N-Nitrosodiphenylamine (1)	10.0 U
98-95-3	Nitrobenzene	10.0 U	101-55-3	4-Bromophenyl-phenylether	10.0 U
78-59-1	Isophorone	10.0 U	118-74-1	Hexachlorobenzene	10.0 U
88-75-5	2-Nitrophenol	10.0 U	87-86-5	Pentachlorophenol	50.0 U
105-67-9	2,4-Dimethylphenol	10.0 U	85-01-8	Phenanthrene	10.0 U
65-85-0	Benzoic Acid	50.0 U	120-12-7	Anthracene	10.0 U
111-91-1	bis(-2-Chloroethoxy)Methane	10.0 U	84-74-2	Di-n-Butylphthalate	10.0 U
120-83-2	2,4-Dichlorophenol	10.0 U	206-44-0	Fluoranthene	10.0 U
120-82-1	1,2,4-Trichlorobenzene	10.0 U	129-00-0	Pyrene	10.0 U
91-20-3	Naphthalene	10.0 U	85-68-7	Butylbenzylphthalate	10.0 U
106-47-8	4-Chloroaniline	10.0 U	91-94-1	3,3'-Dichlorobenzidine	20.0 U
87-68-3	Hexachlorobutadiene	10.0 U	56-55-3	Benzo(a)Anthracene	10.0 U
59-50-7	4-Chloro-3-Methylphenol	10.0 U	117-81-7	bis(2-Ethylhexyl)Phthalate	10.0 U
91-57-6	2-Methylnaphthalene	10.0 U	218-01-9	Chrysene	10.0 U
77-47-4	Hexachlorocyclopentadiene	10.0 U	117-84-0	Di-n-Octyl Phthalate	10.0 U
88-06-2	2,4,6-Trichlorophenol	10.0 U	205-99-2	Benzo(b)Fluoranthene	10.0 U
95-95-4	2,4,5-Trichlorophenol	50.0 U	207-08-9	Benzo(k)Fluoranthene	10.0 U
91-58-7	2-Chloronaphthalene	10.0 U	50-32-8	Benzo(a)Pyrene	10.0 U
88-74-4	2-Nitroaniline	50.0 U	193-39-5	Indeno(1,2,3-cd)Pyrene	10.0 U
131-11-3	Dimethyl Phthalate	10.0 U	53-70-3	Dibenz(a,h)Anthracene	10.0 U
208-96-8	Acenaphthylene	10.0 U	191-24-2	Benzo(g,h,i)Perylene	10.0 U
99-09-2	3-Nitroaniline	50.0 U			

(1) - Cannot be separated from diphenylamine

ORGANICS ANALYSIS DATA SHEET

(PAGE 3)

SAMPLE NUMBER

LABORATORY NAME: NANCO LABS, INC.

CASE NO: 7610

BK 395

PESTICIDE/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 07-15-87

Date Analyzed: 07-25-87

Conc/Dil Factor: ----->

1

Percent Moisture: N/A

GPC Cleanup: Yes___ No XSeparatory Funnel Extraction: Yes X

Continuous Liquid-Liquid Extraction: Yes___

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC (Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	Endrin Aldehyde	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
53494-70-5	Endrin Ketone	0.10 U
72-43-5	Methoxychlor	0.50 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1.00 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.00 U
11096-82-5	Aroclor-1260	1.00 U

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs 1000or Ws Vt 10000Vi 3

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

LABORATORY NAME :NANCO LABS.INC.
CASE NO: 7610

SAMPLE NUMBER

BK-395

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/Kg)
1	NONE FOUND	VOA		
2				
3				
4				
5				
6				
7	UNKNOWN	BNA	1156	25.0 B
8	UNKNOWN	BNA	1420	12.0 J
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

(PAGE 1)

BK-397

1

Percent Moisture: N/A

FORM I

ORGANICS ANALYSIS DATA SHEET

(PAGE 4)

LABORATORY NAME :NANCO LABS.INC.

CASE NO: 7610

SAMPLE NUMBER

BK-397

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/Kg)
1	NONE FOUND	VOA	----	-----
2				
3				
4				
5				
6				
7		BNA	----	-----
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
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21				
22				
23				
24				
25				
26				

ORGANICS ANALYSIS DATA SHEET

(PAGE 1)

SAMPLE NUMBER

Laboratory Name: NANCO LABORATORY INC.

Lab Sample ID No: >F0348

Sample Matrix: WATER

Data Release Authorized By:

Case No: 7610

QC Report No: 000

Contract No: 68-01-7102

Date Sample Received: 07/14/87

BK-398

VOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 07/15/87

Date Analyzed: 07/15/87

Conc/Dil Factor: 1

pH: 10.2

Percent Moisture: N/A

CAS Number	ug/l or ug/Kg (Circle One)	CAS Number	ug/l or ug/Kg (Circle One)		
74-87-3	Chloromethane	10.0 U	79-34-5	1,1,2,2-Tetrachloroethane	5.0 U
74-83-9	Bromomethane	10.0 U	78-87-5	1,2-Dichloropropane	5.0 U
75-01-4	Vinyl Chloride	10.0 U	10061-02-6	Trans-1,3-Dichloropropene	5.0 U
75-00-3	Chloroethane	10.0 U	79-01-6	Trichloroethene	5.0 U
75-09-2	Methylene Chloride	44.0 B	124-48-1	Dibromochloromethane	5.0 U
67-64-1	Acetone	4.4 JB	79-00-5	1,1,2-Trichloroethane	5.0 U
75-15-0	Carbon Disulfide	5.0 U	71-43-2	Benzene	5.0 U
75-35-4	1,1-Dichloroethene	5.0 U	10061-01-5	cis-1,3-Dichloropropene	5.0 U
75-34-3	1,1-Dichloroethane	5.0 U	110-75-8	2-Chloroethylvinylether	10.0 U
156-60-5	Trans-1,2-Dichloroethene	5.0 U	75-25-2	Bromoform	5.0 U
67-66-3	Chloroform	5.0 U	591-78-6	2-Hexanone	10.0 U
107-06-2	1,2-Dichloroethane	5.0 U	108-10-1	4-Methyl-2-Pentanone	10.0 U
78-93-3	2-Butanone	10.0 U	127-18-4	Tetrachloroethene	5.0 U
71-55-6	1,1,1-Trichloroethane	5.0 U	108-88-3	Toluene	9.2
56-23-5	Carbon Tetrachloride	5.0 U	108-90-7	Chlorobenzene	5.0 U
108-05-4	Vinyl Acetate	10.0 U	100-41-4	Ethylbenzene	5.0 U
75-27-4	Bromodichloromethane	5.0 U	100-42-5	Styrene	5.0 U
				Total Xylenes	5.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used.

Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE

If the result is a value greater than or equal to the detection limit, report the value.

U
Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.J
Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C

This flag applies to pesticide parameters where the identification has been confirmed by GC/MS Single component pesticides greater than or equal to 10 ng/ul in the final extract should be confirmed by GC/MS

B

This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER

Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

LABORATORY NAME :MANCO LABS.INC.
CASE NO. 7610

SAMPLE NUMBER

BK-398

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/Kg)
1	NONE FOUND	VOA	----	-----
2				
3				
4				
5				
6				
7		BNA	----	-----
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

(PAGE 1)

BK-399

Percent Moisture: N/A

Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ORGANIC ANALYSIS DATA SHEET

(PAGE 2)

LABORATORY NAME: NANCO LABS. INC.

CASE NO: 7610

SAMPLE NO.

BK-399

SEMIVOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 07/15/87

Date Analyzed: 07/23/87

Conc/Dil Factor:-----> 1

Percent Moisture: N/A

GPC Cleanup: Yes No

Separatory Funnel Extraction: Yes

Continuous Liquid - Liquid Extraction: Yes

CAS Number		ug/l or ug/Kg (Circle One)	CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10.0 U	83-32-9	Acenaphthene	10.0 U
111-44-4	bis(-2-Chloroethyl)Ether	10.0 U	51-28-5	2,4-Dinitrophenol	50.0 U
95-57-8	2-Chlorophenol	10.0 U	100-02-7	4-Nitrophenol	50.0 U
541-73-1	1,3-Dichlorobenzene	10.0 U	132-64-9	Dibenzofuran	10.0 U
106-46-7	1,4-Dichlorobenzene	10.0 U	121-14-2	2,4-Dinitrotoluene	10.0 U
100-51-6	Benzyl Alcohol	10.0 U	606-20-2	2,6-Dinitrotoluene	10.0 U
95-50-1	1,2-Dichlorobenzene	10.0 U	84-66-2	Diethylphthalate	10.0 U
95-48-7	2-Methylphenol	10.0 U	7005-72-3	4-Chlorophenyl-phenylether	10.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	10.0 U	86-73-7	Fluorene	10.0 U
106-44-5	4-Methylphenol	10.0 U	100-01-6	4-Nitroaniline	50.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	10.0 U	534-52-1	4,6-Dinitro-2-Methylphenol	50.0 U
67-72-1	Hexachloroethane	10.0 U	86-30-6	N-Nitrosodiphenylamine (1)	10.0 U
98-95-3	Nitrobenzene	10.0 U	101-55-3	4-Bromophenyl-phenylether	10.0 U
78-59-1	Isophorone	10.0 U	118-74-1	Hexachlorobenzene	10.0 U
88-75-5	2-Nitrophenol	10.0 U	87-86-5	Pentachlorophenol	50.0 U
105-67-9	2,4-Dimethylphenol	10.0 U	85-01-8	Phenanthrene	10.0 U
65-85-0	Benzoic Acid	50.0 U	120-12-7	Anthracene	10.0 U
111-91-1	bis(-2-Chloroethoxy)Methane	10.0 U	84-74-2	Di-n-Butylphthalate	50.0 U
120-83-2	2,4-Dichlorophenol	10.0 U	206-44-0	Fluoranthene	10.0 U
120-82-1	1,2,4-Trichlorobenzene	10.0 U	129-00-0	Pyrene	10.0 U
91-20-3	Naphthalene	10.0 U	85-68-7	Butylbenzylphthalate	10.0 U
106-47-8	4-Chloroaniline	10.0 U	91-94-1	3,3'-Dichlorobenzidine	20.0 U
87-68-3	Hexachlorobutadiene	10.0 U	56-55-3	Benzo(a)Anthracene	10.0 U
59-50-7	4-Chloro-3-Methylphenol	10.0 U	117-81-7	bis(2-Ethylhexyl)Phthalate	10.0 U
91-57-6	2-Methylnaphthalene	10.0 U	218-01-9	Chrysene	10.0 U
77-47-4	Hexachlorocyclopentadiene	10.0 U	117-84-0	Di-n-Octyl Phthalate	10.0 U
88-06-2	2,4,6-Trichlorophenol	10.0 U	205-99-2	Benzo(b)Fluoranthene	10.0 U
95-95-4	2,4,5-Trichlorophenol	50.0 U	207-08-9	Benzo(k)Fluoranthene	10.0 U
91-58-7	2-Chloronaphthalene	10.0 U	50-32-8	Benzo(a)Pyrene	10.0 U
88-74-4	2-Nitroaniline	50.0 U	193-39-5	Indeno(1,2,3-cd)Pyrene	10.0 U
131-11-3	Dimethyl Phthalate	10.0 U	53-70-3	Dibenz(a,h)Anthracene	10.0 U
208-96-8	Acenaphthylene	10.0 U	191-24-2	Benzo(g,h,i)Perylene	10.0 U
99-09-2	3-Nitroaniline	50.0 U			

(1) - Cannot be separated from diphenylamine

ORGANICS ANALYSIS DATA SHEET

(PAGE 3)

SAMPLE NUMBER

LABORATORY NAME: NANCO LABS, INC.
CASE NO: 7610

BK 399

PESTICIDE/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 07-15-87

Date Analyzed: 07-25-87

Conc/Dil Factor: -----> 1

Percent Moisture: N/A

GPC Cleanup: Yes ___ No XSeparatory Funnel Extraction: Yes X

Continuous Liquid-Liquid Extraction: Yes ___

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC (Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	Endrin Aldehyde	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
53494-70-5	Endrin Ketone	0.10 U
72-43-5	Methoxychlor	0.50 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1.00 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.00 U
11096-82-5	Aroclor-1260	1.00 U

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs 1000or Ws Vt 10000Vi 3

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

LABORATORY NAME :NANCO LABS.INC.
CASE NO: 7610

SAMPLE NUMBER

BK-399

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/Kg)
1	NONE FOUND	VOA	---	-----
2				
3				
4				
5				
6				
7	NONE FOUND	BNA	---	-----
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

ORGANICS ANALYSIS DATA SHEET

(PAGE 1)

SAMPLE NUMBER

Laboratory Name: NANCO LABORATORY INC.

Lab Sample ID No: F0345

Sample Matrix: WATER

Data Release Authorized By:

Case No: 7610

QC Report No: 125

Contract No: 68-01-7102

Date Sample Received: 07/14/87

BK-400

VOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 07/15/87

Date Analyzed: 07/15/87

Conc/Dil Factor: 1

pH: 6.5

Percent Moisture: N/A

CAS Number	ug/l or ug/Kg (Circle One)	CAS Number	ug/l or ug/Kg (Circle One)
74-87-3 Chloromethane	10.0 U	79-34-5 1,1,2,2-Tetrachloroethane	5.0 U
74-83-9 Bromomethane	10.0 U	78-87-5 1,2-Dichloropropane	5.0 U
75-01-4 Vinyl Chloride	10.0 U	10061-02-6 Trans-1,3-Dichloropropene	5.0 U
75-00-3 Chloroethane	10.0 U	79-01-6 Trichloroethene	5.0 U
75-09-2 Methylene Chloride	3.1 U	124-48-1 Dibromochloromethane	5.0 U
67-64-1 Acetone	75.0 U	79-00-5 1,1,2-Trichloroethane	5.0 U
75-15-0 Carbon Disulfide	5.0 U	71-43-2 Benzene	5.0 U
75-35-4 1,1-Dichloroethene	5.0 U	10061-01-5 cis-1,3-Dichloropropene	5.0 U
75-34-3 1,1-Dichloroethane	5.0 U	110-75-8 2-Chloroethylvinylether	10.0 U
156-60-5 Trans-1,2-Dichloroethene	5.0 U	75-25-2 Bromoform	5.0 U
67-66-3 Chloroform	5.0 U	591-78-6 2-Hexanone	10.0 U
107-06-2 1,2-Dichloroethane	5.0 U	108-10-1 4-Methyl-2-Pentanone	10.0 U
78-93-3 2-Butanone	10.0 U	127-18-4 Tetrachloroethene	1.9 J
71-55-6 1,1,1-Trichloroethane	5.0 U	108-88-3 Toluene	5.0 U
56-23-5 Carbon Tetrachloride	5.0 U	108-90-7 Chlorobenzene	5.0 U
108-05-4 Vinyl Acetate	10.0 U	100-41-4 Ethylbenzene	5.0 U
75-27-4 Bromodichloromethane	5.0 U	100-42-5 Styrene	5.0 U
		Total Xylenes	5.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used.

Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

BLUE

the result is a value greater than or equal to the detection limit, report the value.

indicates compound was analyzed for but not detected. Report a minimum detection limit for the sample with the U (e.g. 10U)

based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is a minimum attainable detection limit for the sample.

indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit or greater than zero (e.g. 10J).

C

This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides greater than or equal to 10 ng/ul in the final extract should be confirmed by GC/MS.

B

This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER

Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ORGANIC ANALYSIS DATA SHEET
(PAGE 2)

LABORATORY NAME: NANCO LABS. INC.
CASE NO: 7610

SAMPLE NO.
BK-400

SEMIVOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 07/15/87
Date Analyzed: 07/23/87
Conc/Dil Factor:-----> 1
Percent Moisture: N/A

GPC Cleanup: Yes No
Separatory Funnel Extraction: Yes
Continuous Liquid - Liquid Extraction: Yes

CAS Number		ug/l or ug/Kg (Circle One)	CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10.0 U	83-32-9	Acenaphthene	10.0 U
111-44-4	bis(-2-Chloroethyl)Ether	10.0 U	51-28-5	2,4-Dinitrophenol	50.0 U
95-57-8	2-Chlorophenol	10.0 U	100-02-7	4-Nitrophenol	50.0 U
541-73-1	1,3-Dichlorobenzene	10.0 U	132-64-9	Dibenzofuran	10.0 U
106-46-7	1,4-Dichlorobenzene	10.0 U	121-14-2	2,4-Dinitrotoluene	10.0 U
100-51-6	Benzyl Alcohol	10.0 U	606-20-2	2,6-Dinitrotoluene	10.0 U
95-50-1	1,2-Dichlorobenzene	10.0 U	84-66-2	Diethylphthalate	10.0 U
95-48-7	2-Methylphenol	10.0 U	7005-72-3	4-Chlorophenyl-phenylether	10.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	10.0 U	86-73-7	Fluorene	10.0 U
106-44-5	4-Methylphenol	10.0 U	100-01-6	4-Nitroaniline	50.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	10.0 U	534-52-1	4,6-Dinitro-2-Methylphenol	50.0 U
67-72-1	Hexachloroethane	10.0 U	86-30-6	N-Nitrosodiphenylamine (1)	10.0 U
98-95-3	Nitrobenzene	10.0 U	101-55-3	4-Bromophenyl-phenylether	10.0 U
78-59-1	Isophorone	10.0 U	118-74-1	Hexachlorobenzene	10.0 U
88-75-5	2-Nitrophenol	10.0 U	87-86-5	Pentachlorophenol	50.0 U
105-67-9	2,4-Dimethylphenol	10.0 U	85-01-8	Phenanthrene	10.0 U
65-85-0	Benzoic Acid	50.0 U	120-12-7	Anthracene	10.0 U
111-91-1	bis(-2-Chloroethoxy)Methane	10.0 U	84-74-2	Di-n-Butylphthalate	50.0 U
120-83-2	2,4-Dichlorophenol	10.0 U	206-44-0	Fluoranthene	10.0 U
120-82-1	1,2,4-Trichlorobenzene	10.0 U	129-00-0	Pyrene	10.0 U
91-20-3	Naphthalene	10.0 U	85-68-7	Butylbenzylphthalate	10.0 U
106-47-8	4-Chloroaniline	10.0 U	91-94-1	3,3'-Dichlorobenzidine	20.0 U
87-68-3	Hexachlorobutadiene	10.0 U	56-55-3	Benzo(a)Anthracene	10.0 U
59-50-7	4-Chloro-3-Methylphenol	10.0 U	117-81-7	bis(2-Ethylhexyl)Phthalate	10.0 U
91-57-6	2-Methylnaphthalene	10.0 U	218-01-9	Chrysene	10.0 U
77-47-4	Hexachlorocyclopentadiene	10.0 U	117-84-0	Di-n-Octyl Phthalate	10.0 U
88-06-2	2,4,6-Trichlorophenol	10.0 U	205-99-2	Benzo(b)Fluoranthene	10.0 U
95-95-4	2,4,5-Trichlorophenol	50.0 U	207-08-9	Benzo(k)Fluoranthene	10.0 U
91-58-7	2-Chloronaphthalene	10.0 U	50-32-8	Benzo(a)Pyrene	10.0 U
88-74-4	2-Nitroaniline	50.0 U	193-39-5	Indeno(1,2,3-cd)Pyrene	10.0 U
131-11-3	Dimethyl Phthalate	10.0 U	53-70-3	Dibenz(a,h)Anthracene	10.0 U
208-96-8	Acenaphthylene	10.0 U	191-24-2	Benzo(g,h,i)Perylene	10.0 U
99-09-2	3-Nitroaniline	50.0 U			

(1) - Cannot be separated from diphenylamine

ORGANICS ANALYSIS DATA SHEET

(PAGE 3)

SAMPLE NUMBER

LABORATORY NAME: NANCO LABS, INC.
CASE NO: 7610

BK 400

PESTICIDE/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 07-15-87

Date Analyzed: 07-25-87

Conc/Dil Factor: -----> 1

Percent Moisture: N/A

GPC Cleanup: Yes___ No_X__

Separatory Funnel Extraction: Yes_X__

Continuous Liquid-Liquid Extraction: Yes___

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC (Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	Endrin Aldehyde	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
53494-70-5	Endrin Ketone	0.10 U
72-43-5	Methoxychlor	0.50 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1.00 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.00 U
11096-82-5	Aroclor-1260	1.00 U

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs 1000

or Ws

Vt 10000

Vi 3

ORGANICS ANALYSIS DATA SHEET

(PAGE 4)

LABORATORY NAME :NANCO LABS.INC.

CASE NO: 7610

SAMPLE NUMBER

BK-400

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration
				(ug/l or ug/Kg)
1 470826	1,8-CINEOLE	VOA	365	13.0 J
2 -----	UNKNOWN	VOA	430	30.0 J
3 -----	ISOMER OF ETHYL METHYL BENZENE	VOA	481	10.0 J
4 -----				
5 -----				
6 -----				
7 -----	ISOMER OF TRIMETHYL BENZENE	BNA	278	9.4 J
8 104767	1-HEXANOL, 2-ETHYL	BNA	325	25.0 J
9 1195795	FENCHONE	BNA	388	9.7 J
10 -----	UNKNOWN	BNA	439	15.0 J
11 498817	P-MENTHAN-8-01	BNA	449	120.0 J
12 -----	ISOMER OF PHENOL, TETRAMETHYL BUTYL	BNA	924	20.0 J
13 -----	ISOMER OF PHENOL	BNA	931	29.0 J
14 -----	UNKNOWN	BNA	934	13.0 J
15 -----	ISOMER OF PHENYL	BNA	938	25.0 J
16 -----	UNKNOWN	BNA	934	19.0 J
17 -----	ISOMER OF OCTYL PHENOL	BNA	957	20.0 J
18 -----	UNKNOWN	BNA	963	27.0 J
19 -----	UNKNOWN	BNA	1155	13.0 J 5
20 -----	UNKNOWN	BNA	1353	12.0 J
21 -----	UNKNOWN	BNA	1421	18.0 J
22 -----				
23 -----				
24 -----				
25 -----				
26 -----				

ORGANICS ANALYSIS DATA SHEET

(PAGE 1)

SAMPLE NUMBER

Laboratory Name: NANCO LABORATORY INC.

Lab Sample ID No: F0346

Sample Matrix: WATER

Data Release Authorized By:

Case No: 7610

QC Report No: 125

Contract No: 68-01-7102

Date Sample Received: 07/14/87

BK-501

VOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 07/15/87

Date Analyzed: 07/15/87

Conc/Dil Factor: 1

pH: 5.3

Percent Moisture: N/A

CAS Number		ug/l or ug/Kg (Circle One)	CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10.0 U	79-34-5	1,1,2,2-Tetrachloroethane	5.0 U
74-83-9	Bromomethane	10.0 U	78-87-5	1,2-Dichloropropane	5.0 U
75-01-4	Vinyl Chloride	10.0 U	10061-02-6	Trans-1,3-Dichloropropene	5.0 U
75-00-3	Chloroethane	10.0 U	79-01-6	Trichloroethene	5.0 U
75-09-2	Methylene Chloride	3.3 U	124-48-1	Dibromochloromethane	5.0 U
67-64-1	Acetone	5.0 U	79-00-5	1,1,2-Trichloroethane	5.0 U
75-15-0	Carbon Disulfide	5.0 U	71-43-2	Benzene	5.0 U
75-35-4	1,1-Dichloroethene	5.0 U	10061-01-5	cis-1,3-Dichloropropene	5.0 U
75-34-3	1,1-Dichloroethane	5.0 U	110-75-8	2-Chloroethylvinylether	10.0 U
156-60-5	Trans-1,2-Dichloroethene	5.0 U	75-25-2	Bromoform	5.0 U
67-66-3	Chloroform	5.0 U	591-78-6	2-Hexanone	10.0 U
107-06-2	1,2-Dichloroethane	5.0 U	108-10-1	4-Methyl-2-Pentanone	10.0 U
78-93-3	2-Butanone	10.0 U	127-18-4	Tetrachloroethene	5.0 U
71-55-6	1,1,1-Trichloroethane	1.7 J	108-88-3	Toluene	5.0 U
56-23-5	Carbon Tetrachloride	5.0 U	108-90-7	Chlorobenzene	5.0 U
108-05-4	Vinyl Acetate	10.0 U	100-41-4	Ethylbenzene	5.0 U
75-27-4	Bromodichloromethane	5.0 U	100-42-5	Styrene	5.0 U
				Total Xylenes	5.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used.

Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE

If the result is a value greater than or equal to the detection limit, report the value.

U

Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J

Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C

This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides greater than or equal to 10 ng/ul in the final extract should be confirmed by GC/MS.

B

This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER

Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ORGANIC ANALYSIS DATA SHEET

(PAGE 2)

LABORATORY NAME: NANCO LABS. INC.
CASE NO: 7610SAMPLE NO.
BK-501

SEMIVOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 07/15/87
Date Analyzed: 07/23/87
Conc/Dil Factor:-----> 1
Percent Moisture: N/AGPC Cleanup: Yes____ No____
Separatory Funnel Extraction: Yes____
Continuous Liquid - Liquid Extraction: Yes____

CAS Number		ug/l or ug/Kg (Circle One)	CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10.0 U	83-32-9	Acenaphthene	10.0 U
111-44-4	bis(-2-Chloroethyl)Ether	10.0 U	51-28-5	2,4-Dinitrophenol	50.0 U
95-57-8	2-Chlorophenol	10.0 U	100-02-7	4-Nitrophenol	50.0 U
541-73-1	1,3-Dichlorobenzene	10.0 U	132-64-9	Dibenzofuran	10.0 U
106-46-7	1,4-Dichlorobenzene	10.0 U	121-14-2	2,4-Dinitrotoluene	10.0 U
100-51-6	Benzyl Alcohol	10.0 U	606-20-2	2,6-Dinitrotoluene	10.0 U
95-50-1	1,2-Dichlorobenzene	10.0 U	84-66-2	Diethylphthalate	10.0 U
95-48-7	2-Methylphenol	10.0 U	7005-72-3	4-Chlorophenyl-phenylether	10.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	10.0 U	86-73-7	Fluorene	10.0 U
106-44-5	4-Methylphenol	10.0 U	100-01-6	4-Nitroaniline	50.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	10.0 U	534-52-1	4,6-Dinitro-2-Methylphenol	50.0 U
67-72-1	Hexachloroethane	10.0 U	86-30-6	N-Nitrosodiphenylamine (1)	10.0 U
98-95-3	Nitrobenzene	10.0 U	101-55-3	4-Bromophenyl-phenylether	10.0 U
78-59-1	Isophorone	10.0 U	118-74-1	Hexachlorobenzene	10.0 U
88-75-5	2-Nitrophenol	10.0 U	87-86-5	Pentachlorophenol	50.0 U
105-67-9	2,4-Dimethylphenol	10.0 U	85-01-8	Phenanthrene	10.0 U
65-85-0	Benzoic Acid	50.0 U	120-12-7	Anthracene	10.0 U
111-91-1	bis(-2-Chloroethoxy)Methane	10.0 U	84-74-2	Di-n-Butylphthalate	10.0 U
120-83-2	2,4-Dichlorophenol	10.0 U	206-44-0	Fluoranthene	10.0 U
120-82-1	1,2,4-Trichlorobenzene	10.0 U	129-00-0	Pyrene	10.0 U
91-20-3	Naphthalene	10.0 U	85-68-7	Butylbenzylphthalate	10.0 U
106-47-8	4-Chloroaniline	10.0 U	91-94-1	3,3'-Dichlorobenzidine	20.0 U
87-68-3	Hexachlorobutadiene	10.0 U	56-55-3	Benzo(a)Anthracene	10.0 U
59-50-7	4-Chloro-3-Methylphenol	10.0 U	117-81-7	bis(2-Ethylhexyl)Phthalate	10.0 U
91-57-6	2-Methylnaphthalene	10.0 U	218-01-9	Chrysene	10.0 U
77-47-4	Hexachlorocyclopentadiene	10.0 U	117-84-0	Di-n-Octyl Phthalate	10.0 U
88-06-2	2,4,6-Trichlorophenol	10.0 U	205-99-2	Benzo(b)Fluoranthene	10.0 U
95-95-4	2,4,5-Trichlorophenol	50.0 U	207-08-9	Benzo(k)Fluoranthene	10.0 U
91-58-7	2-Chloronaphthalene	10.0 U	50-32-8	Benzo(a)Pyrene	10.0 U
88-74-4	2-Nitroaniline	50.0 U	193-39-5	Indeno(1,2,3-cd)Pyrene	10.0 U
131-11-3	Dimethyl Phthalate	10.0 U	53-70-3	Dibenz(a,h)Anthracene	10.0 U
208-96-8	Acenaphthylene	10.0 U	191-24-2	Benzo(g,h,i)Perylene	10.0 U
99-09-2	3-Nitroaniline	50.0 U			

(1) - Cannot be separated from diphenylamine

ORGANICS ANALYSIS DATA SHEET

(PAGE 3)

SAMPLE NUMBER

LABORATORY NAME: NANCO LABS, INC.
CASE NO: 7610

BK 501

PESTICIDE/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 07-15-87

Date Analyzed: 07-25-87

Conc/Dil Factor: -----> 1

Percent Moisture: N/A

GPC Cleanup: Yes___ No_X__

Separatory Funnel Extraction: Yes_X__

Continuous Liquid-Liquid Extraction: Yes___

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC (Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	Endrin Aldehyde	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
53494-70-5	Endrin Ketone	0.10 U
72-43-5	Methoxychlor	0.50 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1.00 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.00 U
11096-82-5	Aroclor-1260	1.00 U

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs 1000or Ws Vt 10000Vi 3

ORGANICS ANALYSIS DATA SHEET
(PAGE 4)

LABORATORY NAME :NANCO LABS.INC.
CASE NO: 7610

SAMPLE NUMBER

BK-501

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/Kg)
1	UNKNOWN	VOA	435	200.0 J
2				
3				
4				
5				
6				
7 21964498	1,13-TETRADECADIENE	BNA	1156	13.9 J B
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

RECORD OF COMMUNICATION		<input type="checkbox"/> PHONE CALL <input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> OTHER (SPECIFY) _____				
TO:		FROM:		DATE		
Leon Lazarus		Amy Brochu		8/21/87		
				TIME 4:00 PM		
SUBJECT CLP Inorganics Data Packages for Quality Assurance Review						
SUMMARY OF COMMUNICATION Attached are the following CLP Inorganics Data Packages to be reviewed for Quality Assurance:						
SITE	CASE #/ SAS #	LABORATORY	ANALYSIS/ MATRIX	NUMBER OF SAMPLES	BLANK NUMBER(S)	DUPLICATE NUMBER(S)
IBM-Owego, RCRA	7620	Chemtech	Inorganics water	6	MBL176	MBL171 & 175
Beehler & Radford, FIT/SI	7608	Chemtech	Inorganics soil water	7 <i>84</i>	MBK580, 671	MBK578 & 661, MBK579 & 662
Cinnaminson, REM2/RI	7611	Chemtech	Inorganics water (38-dissolved, 38-total)	76	MBL079, 080,075, 076,083, 084,052, 051,049,046	MBL040 & 090, 041 & 089, 082 & 085, 081 & 086
Vineland, REM3/RI	7390	RMAL	Inorganics soil water	13 2	MBJ478,035	None
Newburgh LF, FIT/SI	7569	RMAL	Inorganics soil water	6 3	MBK728	None
Marathon Battery, REM3/RI	7617	PBS & J	Inorganics soil water	21 1	MBJ758	MBJ756 & 765, MBJ741 & 743
CONCLUSIONS, ACTION TAKEN OR REQUIRED						
Commercial Envelope, FIT/SI	7610	Chemtech	Inorganics soil water	2 5	MBJ449,450	None
North Sea LF, REM2/Rem.	7612	Chemtech	Inorganics soil water	1 1	MBJ982	None
Bog Creek Farm, REM3/Rem.	7616	Accu-Labs	Inorganics water	22	MBK631,632 616,617	None
INFORMATION COPIES						
TO: File						

DEC 07 1987

STANDARD OPERATING PROCEDURE

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Date: Sep-3 1988
Number: NW-2
Revision: 5

Title: Appendix A.1: Data Assessment - Contract
Compliance (Significant Element Review)

Contractor Preparer Monica Chiaramonte

Completion Date 12/3/87

NOTE: All "action" requirements apply to data preparer, unless specifically stated otherwise.

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
A.1.1 <u>Contract Compliance Screening Report (CCS) - Present?</u>	<input checked="" type="checkbox"/>	___	___
A.1.2 <u>Record of Communication (from RSCC) - Present?</u> Action: If no, request from RSCC.	<input checked="" type="checkbox"/>	___	___
A.1.3 <u>Sample Traffic Report - Present or on file?</u> Action: If no, request from Regional Sample Control Center (RSCC).	<input checked="" type="checkbox"/>	___	___
A.1.4 <u>Cover Page - Present?</u> ACTION: If no, prepare Telephone Record Log, and contact laboratory. Do numbers of sample correspond to numbers on Record of Communication? Do sample numbers on cover page agree with sample numbers on: a. Traffic Report Sheet? b. Form I's? c. Surveillance and Monitoring Branch Review ACTION: If no for any of the above, contact RSCC for clarification.	<input checked="" type="checkbox"/>	___	___
A.1.5 <u>Form I (Data Reporting) - All present and complete?</u> ACTION: If no, prepare telephone record log and contact laboratory.	<input checked="" type="checkbox"/>	___	___

STANDARD OPERATING PROCEDURE

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Date: Sep-3 1986
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Title: Appendix A.1: Data Assessment - Contract
Compliance (Significant Element Review)

YES NO N/A

A.1.6 Holding Times (Aqueous Samples Only)
(Examine Sample Traffic Reports and Form X)

Mercury (28 days) - Exceeded?

— ☒ —

Cyanide (14 days) - Exceeded?

— ☐ ☒ —

Other metals (6 months) - Exceeded?

— ☒ —

Conventionals (Use 40 CFR 136 criteria) - Exceeded?

— ☐ ☒ —

Which Parameters? _____

CONTRACTOR ACTION: Prepare a list of all samples and analytes for which holding times have been exceeded. Specify the number of days from date of collection (see traffic report) to the date of analysis (from raw data). Attach to checklist.

NWB ACTION: If yes, reject (red-line) values less than Instrument Detection Limit (IDL). Flag as estimated (J) those values above IDL.

A.1.7 Raw Data

Digestion Log* for flame AA/ICP present?

☒ — —

Digestion Log for furnace AA present?

☒ — —

Digestion Log for mercury present?

☒ — —

Digestion Log for cyanides present?

☐ — ☒

*Weights, dilutions, and volumes used to obtain the reported values.

Measurement readout record present?

ICP

☒ — —

Flame AA

☒ — —

Furnace AA

☒ — —

Mercury

☒ — —

Cyanides

☐ — ☒

Conventionals: _____

☐ — ☒

Title: Appendix A.1: Data Assessment - Contract
Compliance (Significant Element Review)

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
Record of 4 point calibration present? Flame AA	[<input checked="" type="checkbox"/>]	—	—
Furnace AA	[<input checked="" type="checkbox"/>]	—	—

NOTE: If less than 4, other standards must be run immediately after calibration, and be \pm 5% of true value.

Record of 4 point calibration present? Mercury	[<input checked="" type="checkbox"/>]	—	—
Cyanide	[<input type="checkbox"/>]	—	[<input checked="" type="checkbox"/>]

Percent solids calculations present for soil (sediments)?	[<input checked="" type="checkbox"/>]	—	—
---	---	---	---

ACTION: If no for any of above, prepare Telephone Record Log and contact laboratory.

Was one prep blank analyzed for each 20 samples?	[<input checked="" type="checkbox"/>]	—	—
--	---	---	---

MMB ACTION: If no, flag as estimated (J) all data which prep blank was not analyzed.

NOTE: If only one blank was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).

Do concentration of field blanks fall below two times IDL for all <u>aqueous</u> parameters? And soil parameters?	[<input type="checkbox"/>]	[<input checked="" type="checkbox"/>]	—
---	------------------------------	---	---

*Cu, Hg, Zn

MMB ACTION: If no, reject (red-line) all data (aqueous) (except field blank) that has a concentration less than ten times the (threetimes for solids) field blank value but not flagged with a "U" (less than).

A.1.8.1 Form II (Initial and Continuing Calibration Verification)
Present and complete?

[<input checked="" type="checkbox"/>]	—	—
---	---	---

ACTION: If no, prepare Telephone Record Log and contact laboratory.

STANDARD OPERATING PROCEDURE

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Date: Sep-3 1986
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Title: Appendix A.1: Data Assessment - Contract
Compliance (Significant Element Review)

YES NO N/A

A.1.8.2 Circle all values on Data Summary Sheet that are outside of contract windows. Are all calibration standards (initial and continuing) within 75-125%?

[✓] — —

Are all calibration standards (initial and continuing) within 50-150%?

[✓] — —

NMB ACTION: Flag as estimated (J) all data analyzed between a calibration standard of 50-75% or 125-150% recovery and nearest adjacent calibration standards reject (red-line) as unacceptable data if recovery of calibration standard is below 50% or above 150% for nearest adjacent standards.

A.1.9.1 Form III (Blanks) - Present and complete?

[✓] — —

NMB ACTION: If no, prepare Telephone Record Log and contact laboratory.

A.1.9.2 Form III (Blanks) and Field Blanks

Circle all calibration blank values on Data Summary Sheet that are above IDL. Are all calibration blank values less than Contract Required Detection Limits (CRDL)?

[✓] — —

NMB ACTION: If no, flag as estimated (J) on Form I all data between calibration blank with value over CRDL and nearest adjacent calibration blank.

Was an initial calibration blank analyzed?

[✓] — —

Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (whichever is more frequent)?

[✓] — —

CONTRACTOR ACTION: List those analytes which are out of compliance with the above criteria.

NMB ACTION: If no, flag as estimated (J) all values not analyzed within 5 samples of calibration blank.

Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

Do concentrations of prep blanks fall below two times IDL for all parameters?

YES NO N/A

[✓]

MMB ACTION: If no, reject (red-line) all data that has a concentration less than ten times the prep blank value, but not flagged with a "0" (less than).

1.1.10.1 Form IV (ICP Interference Check Sample) - Present and complete? NOTE: Not required for furnace AA, flame AA, mercury and Ca, K, Na, and Mg.

[✓]

ACTION: If no, prepare Telephone Record Log and contact laboratory.

1.1.10.2 Form IV (ICP Interference Check Sample [ICS]) - Circle all values on Data Summary Sheet that are more than $\pm 20\%$ of established mean value. Are all ICP Interference Check Sample results inside of control limits ($\pm 20\%$ of true value)?

[✓]

If no, is concentration of Al, Ca, Fe, or Mg lower in sample than in ICS?

[]

[✓]

MMB ACTION: If no, flag as estimated (J) those sample results for which ICS recovery is between $\pm 20\%$ to 50% of mean value; and reject (red-line) those sample results for which ICS recovery is less than 50% . If ICS recovery is above 150% , reject positive results only (not flagged with a "0").

1.1.1.1 Form IX (ICP Serial Dilution) - Circle all values on Data Summary Sheet with a RPD greater than 10% . Are all ICP Serial Dilution results within control limit of 10% RPD?

[]

✓*

*Cr, Ni, V
(aqueous)

If no, are all associated data on Form I's flagged with an "2"?

[]

✓

MMB ACTION: If not flagged with an "2" flag as estimated (J) all associated samples results for which RPD is greater than 10% but less than 100% ; reject (red-line) all associated sample results for which RPD is above 100% .

Title: Appendix A.1: Data Assessment - Contract
Compliance (Significant Element Review)NOTE: Either diluted or undiluted analysis
may be used to report final value as
long as either is above 10 times IDL.YES NO N/AA.1.12.1 Form V (Spiked Sample Recovery) - Present and
complete for each matrix type? NOTE: Not required
for Ca, Mg, K, and Na (both matrix types), Al and
Fe (soil only).[✓] — —ACTION: If no, prepare telephone record log and
contact laboratory.A.1.12.2 Form V (Spiked Sample Recovery)

Was field blank used for spiked samples?

— [✓] —If yes, was field blank described as such on
Traffic Report?[] — ✓MMB ACTION: Flag all data as estimated (J) for
which field blank was used as spiked
sample.Was at least one spiked sample prepared and
analyzed for: every 20 water samples?[✓] — —

Every 20 soil/sediment samples?

[✓] — —For both AA and ICP when both are used for same
analyte?[✓] — —MMB ACTION: If no, flag as estimated (J) all data
for which spiked sample was not
analyzed. NOTE: If only one spiked
sample was analyzed for more than 20
samples, then first 20 samples analyzed
do not have to be flagged as estimated
(J).Circle all values on Data Summary Sheet that are
outside of control limits (750 to 1250).

Are all recoveries within control limits?

[] ✓ * —If no, is sample concentration greater than four
times spike concentration?[] ✓ ** —* Soil: Sb, As, Pb, Se
Ag,
Water: Al, Fe, Pb,
Mn, Se

** Water: Se

Soil: Sb, As, Pb, Se, Ag

Title: Appendix A.1: Data Assessment - Contract
Compliance (Significant Element Review)

ACTION: If no, circle those analytes on Form V for which sample concentration was not greater than four times the spike concentration.

YES NO N/A

Are any spike recoveries: a) greater than 150%?

✓* [] —

* Soil: Pb

b) less than 50%?

✓** [] —

** Soil: Sb, As, Se
Water: Se

NCB ACTION: If greater than 150%, reject (red-line) all associated aqueous data not flagged with a "U" (less than value). Likewise, flag associated soil/sediment data as estimated (J) which are not flagged with a "U".

If less than 50%, reject (red-line) all associated data for aqueous samples only. Flag associated soil/sediment data as estimated (J).

A.1.13.1 Form VI (Lab) Duplicates - Present and complete for each matrix type?

[✓] — —

ACTION: If no, prepare Telephone Record Log and contact laboratory.

A.1.13.2 Form VI (Lab) Duplicates

Was field blank used for spiked samples?

— [✓] —

ACTION: If yes, flag all data as estimated (J) for which field blank was used as duplicate.

Was at least one duplicate sample prepared and analyzed for: every 20 water samples?

[✓] — —

Every 20 soil/sediment samples?

[✓] — —

NCB ACTION: If no, flag as estimated (J) all data for which duplicate sample was not analyzed. **NOTE:** If only one duplicate sample was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).

Title: Appendix A.1: Data Assessment - Contract
Compliance (Significant Element Review)

Circle all values on Data Summary Sheet that are outside of control limits (20% or CRDL).

Are all values within control limits?

YES NO N/A

[] [✓] []

X Soil: Co, Pb (F)

Aqueous

Is any RPD greater than 50% where sample and duplicate are both greater than 5 times CRDL?

[] [✓] []

Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL, but greater than CRDL?

[] [✓] []

MMB ACTION: If yes, reject (red-line) all associated data.

Soil/Sediment

Is any RPD greater than 100% where sample and duplicate are both greater than 5 times CRDL?

[] [✓] []

Is any difference between sample and duplicate greater than 2 times CRDL where sample and/or duplicate is less than 5 times CRDL but greater than CRDL?

[] [✓] []

MMB ACTION: If yes, reject (red-line) all associated data.

A.1.13.3 Is "NC" reported in RPD column for any sample duplicate pair where either value is less than CRDL?

[✓] [] []

MMB ACTION: If no, write in "NC" with red pencil on Form VI and initial. Note under Data Acceptability Narrative (contract non-compliance).

A.1.14.1 Form VII (Instrument Detection Limits [IDL] and Laboratory Control Sample [LCS])

IDLs present and complete?

[✓] [] []

LCSs present and complete: aqueous?

[✓] [] []

soil/sediment?

[✓] [] []

Title: Appendix A.1: Data Assessment - Contract
Compliance (Significant Element Review)

ACTION: If no, prepare Telephone Record Log
and contact laboratory.

YES NO N/A

A.1.14.2 Form VII (Instrument Detection Limits [IDL] and
Laboratory Control Sample [LCS])

Circle all IDL values greater than CRDL on data
summary sheet.

IS IDL greater than CRDL for any parameter?

✓*

* Pb(P) SHL+K

HMB ACTION: If yes, reject (red-line) all values
flagged with "U" (less than "values").

Circle all LCS values outside of control limits
(80% to 120%) on data summary sheet.

Is any LCS value: between 50% and 80%?

 ✓

between 120% and 150%?

 ✓

less than 50%?

 ✓

greater than 150%?

 ✓

HMB ACTION: Between 50% to 80%, flag all
associated data as estimated (J);
between 120% to 150% flag all
positive (not flagged with a "U")
results as estimated (J); less than
50% reject (red-line) all data;
greater than 150% reject all posi-
tive results.

A.1.15.1 Form VIII (Standard Additions Results) - Present?

✓

If no, is any Form I result coded with an "S"
or a "+?"

ACTION: If yes, write request on Telephone Record Log.

A.1.15.2 Furnace Standard Addition Results - Form VIII

Is any post-digestion spike recovery less than
10% for any result? (See RAW DATA)

 ✓

CONTRACTOR ACTION: Prepare a list of all results with
recoveries less than 10%.

Title: Appendix A.1: Data Assessment - Contract
Compliance (Significant Element Review)

MMB ACTION: If yes, reject (red-line) affected data.

YES NO N/A

Is coefficient of correlation less than 0.990 for any sample?

___ (✓) ___

MMB ACTION: If yes, reject (red-line) affected data.

A.1.15.3 Form IX (ICP Serial Dilutions)

Present and complete for each matrix type?

(✓) ___ ___

ACTION: If no, write request on Telephone Record Log.

A.1.16.1 Dissolved Inorganics

Were any analyses performed for dissolved as well as total analytes?

___ (✓) ___

If yes, apply the following questions only if both dissolved and total constituents are above CRDL (For SAS parameters: above 5 * IDL).

Is the concentration of any dissolved analyte greater than its total concentration by more than 10%.

___ (✓) ___

Is the concentration of any dissolved analyte greater than its total concentration by more than 50%?

___ (✓) ___

MMB ACTION: If more than 10%, flag both dissolved and total values as estimated (J); if more than 50% reject (red-line) the data for both values.

CONTRACTOR ACTION: Prepare a list comparing differences between all dissolved and total analytes. Compute the differences as a percent of the total analyte only when both dissolved and total concentrations are above CRDL (5 * IDC for SAS parameters).

STANDARD OPERATING PROCEDURE

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Date: Sep-3 1988
Number: MW-2
Revision: 5

Title: Appendix A.3: Data Acceptability Narrative

Case# 7610 Site Commercial Envelope
Lab Chemtech

A.3.1 Are all data of acceptable quality? Yes No ✓

If no, list exceptions with reason(s) for rejection of qualification as estimated value (J).

Cu, Hg - rejected (red-lined) for sample MBK 568 because the
concentration of field blank is $> 2 \times \text{IDL}$ and sample
conc. $< 10 \times \text{field blank concentration}$.

Cu - rejected for samples MBK 567, 468 - conc. of field
blank $> 2 \times \text{IDL}$, sample conc. $< 10 \times \text{field blank conc.}$

Cu - rejected for samples MBE 899, MBJ 295 - conc. of field
blank $> 2 \times \text{IDL}$, sample conc. $< 3 \times \text{field blank conc.}$

Cr, Ni, V - flagged with "J" for samples MBJ 449, 450,
MBK 468, 567, 568 because $\text{RPD} > 10\%$ and $< 100\%$
for lab duplicate (aqueous)

Pb - flagged with "J" for sample MBJ 295 - matrix spike recovery
 $> 150\%$ ($116.8 > 150$) and sample conc. $< 4 \times \text{spike conc.}$

Se, As, Sb - flagged with "J" for samples MBE 899, MBJ 295 - spike
recovery $< 50\%$ and sample conc. $< 4 \times \text{spike conc.}$

Se - rejected for samples MBJ 449, 450; MBK 468, 567, 568 -
matrix spike recovery $< 50\%$, sample conc. $< 4 \times \text{spike conc.}$

Contractor

Reviewer:

Signature

Monica Chissamonte

Date: 12/3/87

Verified by:

Signature

Frank J. Minin

Date: 12-4-87

MONITORING PROCEDURES

Date:
Number:
Revision: 0

Title: APPENDIX A - CHECK LIST AND REPORT FORM.

A.1 This section must be completed by the Surveillance and Monitoring Section.

A.1.1 Project Name/Site: Commercial EnvelopeA.1.2 Contract No. _____ Case No. 7610

A.1.3 Objective of Study (Specify data used) _____

Site Inspection7 TFA 02 P922A.1.4 Name of Analytical Laboratory 1: ChemtechA.1.4.1 Sample Matrix: Water 5 Soil/Sediment 2

Other (Describe) _____

A.1.4.2 Concentration Requested: Low ✓ Medium _____A.1.4.3 Sample Nos.: W: MBK468, 567, 568, MBJ449, MBJ450.
S: MBE899; MBJ295.

A.1.5 Name of Analytical Laboratory 2: _____

A.1.5.1 Sample Matrix: Water _____ Soil/Sediment _____

Other (Describe) _____

A.1.5.2 Concentration Requested: Low _____ Medium _____

A.1.5.3 Sample Nos.: _____

A.1.6 Name of Laboratory 3: _____

A.1.6.1 Sample Matrix: Water _____ Soil/Sediment _____

Other (Describe) _____

A.1.6.2 Concentration Requested: Low _____ Medium _____

A.1.6.3 Sample Nos.: _____

WA25-3839 - AMENDMENT THREE (3)
U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

Date 8/17/87

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name Chemtech Consulting Group
SOW No. 785

Case No. 7610
Q.C. Report No. G2- 912

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
<u>MBJ 449</u>	<u>G2-912-01</u>		
<u>450</u>	<u>02</u>		
<u>MBK 468</u>	<u>03</u>		
<u>567</u>	<u>04</u>		
<u>568</u>	<u>05</u>		
<u>MBE 899</u>	<u>06</u>		
<u>MBJ 295</u>	<u>07</u>		

Comments:

ICP interelement and background corrections applied? Yes X No
If yes, corrections applied before X or after generation of raw data.

Footnotes:

NR - Not required by contract at this time

Form I:

- Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, report the value in brackets (i.e., [10]). Indicate the analytical method used with P (for ICP), A (for Flame AA) or F (for Furnace AA).
- U - Indicates element was analyzed for but not detected. Report with the instrument detection limit value (e.g., 10U).
- E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.
- S - Indicates value determined by Method of Standard Addition.
- H - Indicates spike sample recovery is not within control limits.
- *
- Indicates duplicate analysis is not within control limits.
- Indicates the correlation coefficient for method of standard addition is less than 0.995
- H - Indicates duplicate injection results exceeded control limits.

Indicate method used: P for ICP; A for Flame AA and F for Furnace.

Form I

U.S. EPA Contract Laboratory Program
 Sample Management Office
 P.O. Box 818 - Alexandria, VA 22313
 703/557-2490 FTS: 6-557-2490

EPA Sample No.

MBE 899

Date

8/17/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting GroupCASE NO. 7610SOW NO. 785Lab Receipt Date 7/14/87LAB SAMPLE ID. NO. G2-912-06QC REPORT NO. -G2- 912

Elements Identified and Measured

Concentration: Low X Medium
 Matrix: Water Soil X Sludge Other

ug/L or (mg/kg dry weight) (Circle One)

1. Aluminum <u>9820</u> P	13. Magnesium <u>1300</u> P
2. Antimony <u>[8.04]</u> P N J	14. Manganese <u>89.6</u> P
3. Arsenic <u>5.20</u> P N * J	15. Mercury <u>8.11</u> U
4. Barium <u>[13.8]</u> P	16. Nickel <u>[4.36]</u> P
5. Beryllium <u>0.89</u> U P	17. Potassium <u>265</u> A
6. Cadmium <u>1.24</u> P	18. Selenium <u>0.44</u> U P N J
7. Calcium <u>1300</u> P *	19. Silver <u>2.29</u> P N
8. Chromium <u>10.8</u> P	20. Sodium <u>232</u> U P
9. Cobalt <u>[4.42]</u> P	21. Thallium <u>1.78</u> U P
10. Copper <u>12.4</u> P	22. Vanadium <u>13.4</u> P
11. Iron <u>10900</u> P	23. Zinc <u>20.7</u> P
12. Lead <u>20</u> U P N *	Percent Solids (Z) <u>90.0</u>
Cyanide <u>NR</u>	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- brown. After- light yellow texture: coarse
Drum's texture for Pb 3x10

Lab Manager: E. Hecker

Form I

U.S. EPA Contract Laboratory Program
 Sample Management Office
 P.O. Box 818 - Alexandria, VA 22313
 703/557-2490 FAX: 8-557-2490

EPA Sample No.

MBJ 295

Date

8/17/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group

CASE NO. 7610

SOW NO. 785

Lab Receipt Date 7/14/87

LAB SAMPLE ID. NO. G2-912-07

QC REPORT NO. G2- 912

Elements Identified and Measured

Concentration: Low X Medium
 Matrix: Water Soil X Sludge Other

ug/L or (mg/kg dry weight) (Circle One)

1. Aluminum 6070 P	13. Magnesium 1890 P
2. Antimony 7.08 U P N J	14. Manganese 56.8 P
3. Arsenic 4.48 P S N * J	15. Mercury 0.69
4. Barium 111.4 P	16. Nickel 11.76 P
5. Beryllium 0.86 U P	17. Potassium 183 A
6. Cadmium 0.86 U P	18. Selenium 0.43 U P N J
7. Calcium 2410 P *	19. Silver 1.50 U P N
8. Chromium 8.78 P	20. Sodium 224 U P
9. Cobalt 3.45 P	21. Thallium 1.72 U P
10. Copper 20.8 P	22. Vanadium 7.21 P
11. Iron 7820 P	23. Zinc 62.5 P
12. Lead 53.4 P P J	Percent Solids (%) 93.2
Cyanide NR	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before-brown After-light yellow Texture: coarse

Lab Manager: E. Hedden

Form I

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 703/557-2490 FTS: 8-557-2490

EPA Sample No.

MBJ 449

Date

8/17/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group

CASE NO. 7610

SOW NO. 785

Lab Receipt Date 7/14/87

LAB SAMPLE ID. NO. G2-912-01

QC REPORT NO. G2-912

Elements Identified and Measured

Concentration:

Low

X

Medium

Matrix: Water

X

Soil

Sludge

Other

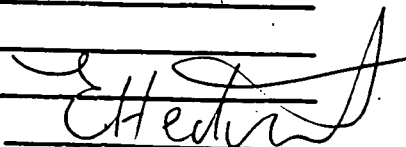
(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum 100 U P	13. Magnesium 344 U P
2. Antimony 33 U P	14. Manganese 6 U P
3. Arsenic 6 U P	15. Mercury 0.20 U
4. Barium 40 U P	16. Nickel 6 U P J
5. Beryllium 4 U P	17. Potassium 500 U A
6. Cadmium 4 U P	18. Selenium 20 U P N
7. Calcium 740 U P	19. Silver 7 U P
8. Chromium 9 U P J	20. Sodium 1045 U P
9. Cobalt 7 U P	21. Thallium 8 U P
10. Copper 25.1 P	22. Vanadium 12 U P J
11. Iron 100 U P	23. Zinc [15.5] P
12. Lead 2 U P	Percent Solids (1)
Cyanide MR	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before colorless After colorless Clarity: clear
DIUTUM Factor for Se 1x10

Lab Manager



Form I

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 703/557-2490 FTS: 8-557-2490

EPA Sample No.

MBJ 450

Date

8/17/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting GroupCASE NO. 7610SOW NO. 785Lab Receipt Date 7/14/87LAB SAMPLE ID. NO. G2-912-02QC REPORT NO. G2-912

Elements Identified and Measured

Concentration: Low X Medium
 Matrix: Water X Soil Sludge Other

(ug/L) or ug/kg dry weight (Circle One)

1. Aluminum <u>100 U P</u>	13. Magnesium <u>344 U P</u>
2. Antimony <u>33 U P</u>	14. Manganese <u>6 U P</u>
3. Arsenic <u>6 U P</u>	15. Mercury <u>0.52</u>
4. Barium <u>40 U P</u>	16. Nickel <u>6 U P J</u>
5. Beryllium <u>4 U P</u>	17. Potassium <u>500 U A</u>
6. Cadmium <u>4 U P</u>	18. Selenium <u>20 U P N</u>
7. Calcium <u>740 U P</u>	19. Silver <u>7 U P</u>
8. Chromium <u>9 U P J</u>	20. Sodium <u>1045 U P</u>
9. Cobalt <u>7 U P</u>	21. Thallium <u>8 U P</u>
10. Copper <u>43.7 P</u>	22. Vanadium <u>12 U P J</u>
11. Iron <u>130 P</u>	23. Zinc <u>[15-1] P</u>
12. Lead <u>2 U P</u>	

Cyanide XIRPercent Solids (Z)

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- Colorless After- Colorless Clarity: Clear

Drum's Fortia for 50' x 10

Lab Manager: E. Hedrick

Form I

U.S. EPA Contract Laboratory Program
 Sample Management Office
 P.O. Box 818 - Alexandria, VA 22313
 703/557-2490 FTS: 9-557-2490

EPA Sample No.

MBK 468

Date

8/17/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting GroupCASE NO. 7610SOW NO. 785Lab Receipt Date 7/14/87LAB SAMPLE ID. NO. G2-912-03QC REPORT NO. G2-912

Elements Identified and Measured

Concentration: Low X Medium
 Matrix: Water X Soil Sludge Other

(ug/L or mg/kg dry weight (Circle One))

1. Aluminum <u>65000</u> ?	13. Magnesium <u>12400</u> ?
2. Antimony <u>33</u> V ?	14. Manganese <u>2650</u> ?
3. Arsenic <u>74.9</u> ?	15. Mercury <u>0.20</u> V
4. Barium <u>375</u> ?	16. Nickel <u>12</u> ? J
5. Beryllium <u>6.4</u> ?	17. Potassium <u>6790</u> A
6. Cadmium <u>20.1</u> ?	18. Selenium <u>2</u> V ? N
7. Calcium <u>22200</u> ?	19. Silver <u>7</u> V ?
8. Chromium <u>104</u> ? J	20. Sodium <u>16500</u> ?
9. Cobalt <u>98.2</u> ?	21. Thallium <u>8</u> V ?
10. Copper <u>288</u> ?	22. Vanadium <u>150</u> ? J
11. Iron <u>160000</u> ?	23. Zinc <u>374</u> ?
12. Lead <u>152</u> ?	

Cyanide NRPercent Solids (%)

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- brown After- yellow . Clarity: very cloudy
21" UHIM filter for Pb: x20

Lab Manager: E. H. H.

Form I

U.S. EPA Contract Laboratory Program
 Sample Management Office
 P.O. Box 818 - Alexandria, VA 22313
 703/557-2490 FTS: 5-557-2490

EPA Sample No.

MBK 567

Date

8/17/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting GroupCASE NO. 7610SOW NO. 785Lab Receipt Date 7/14/87LAB SAMPLE ID. NO. G2-912-04QC REPORT NO. G2-912

Elements Identified and Measured

Concentration: Low X Medium
 Matrix: Water X Soil Sludge Other

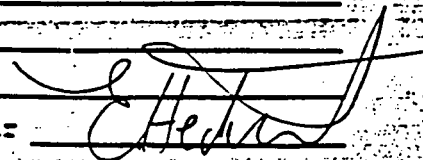
(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum <u>38100 P</u>	13. Magnesium <u>7580 P</u>
2. Antimony <u>33 U P</u>	14. Manganese <u>832 P</u>
3. Arsenic <u>19.0 P S</u>	15. Mercury <u>0.20 U</u>
4. Barium <u>147 P</u>	16. Nickel <u>58.3 P J</u>
5. Beryllium <u>4 U P</u>	17. Potassium <u>13840 A</u>
6. Cadmium <u>8.9 P</u>	18. Selenium <u>2 U P N</u>
7. Calcium <u>23600 P</u>	19. Silver <u>43.4 P</u>
8. Chromium <u>87.4 P J</u>	20. Sodium <u>23300 P</u>
9. Cobalt <u>125.5 P</u>	21. Thallium <u>8 U P</u>
10. Copper <u>126 P</u>	22. Vanadium <u>83.5 P J</u>
11. Iron <u>63400 P</u>	23. Zinc <u>179 P</u>
12. Lead <u>33 P S</u>	Percent Solids <u>(%)</u>
Cyanide <u>NR</u>	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- brown After- light yellow Clarity: very cloudy

Lab Manager



Form I

U.S. EPA Contract Laboratory Program
 Sample Management Office
 P.O. Box 818 - Alexandria, VA 22313
 703/557-2490 FTS: S-557-2490

EPA Sample No.

MBK 568

Date

8/17/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group

CASE NO. 7610

SOW NO. 785

Lab Receipt Date 7/14/87

LAB SAMPLE ID. NO. G2-912-05

QC REPORT NO. G2-912

Elements Identified and Measured

Concentration: Low X Medium _____
 Matrix: Water X Soil _____ Sludge _____ Other _____

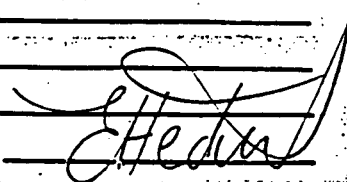
(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum 64600 P	13. Magnesium 12100 P
2. Antimony 33 U P	14. Manganese 5710 P
3. Arsenic 29.7 P S	15. Mercury 0.32
4. Barium 367 P	16. Nickel 104 P J
5. Beryllium 14.2 P	17. Potassium 6530 A
6. Cadmium 9.8 P	18. Selenium 2 U P N
7. Calcium 13500 P	19. Silver 7 U P
8. Chromium 142 P J	20. Sodium 12200 P
9. Cobalt 149.2 P	21. Thallium 8 U P
10. Copper 198 P	22. Vanadium 130 P J
11. Iron 81200 P	23. Zinc 349 P
12. Lead 548 P P	Present Solids (Z)
Cyanide AIR	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before-brown After-light yellow clarity: very cloudy

Lab Manager



REFERENCE NO. 15

HARVEST LANE WELL FIELD & PUMPING STATION

Location: East side of Harvest Lane, South of Southern
State Parkway, West Islip

Plot Plan Drawing No.: ZA-850-1

STATION DATA

Area of Site: 2.168 Acres
Type of Structure: Brick & Concrete Block
Telemetry: Yes

Standby Diesel Driven Generator Set Installed: 60-80 KW
Fence Enclosure Type: Chain Link

WELL DATA

S.C.W.A. Well No.	D.E.C. Well No.	W.S.A. No.	Decision Date	Well Dwg. No.	Dia.	Depth	Type	Date in Service	Status	Type of Structure	Remarks
1	S-21366	4278	10-4-62	ZA-864-18	16"x12"	455'-5"	Rotary	6-4-63	Permanent	In Building	
2	S-22389	4534	12-5-63	ZA-1081-4	"	465'-4"	"	6-12-64	"	S & S*	
3	S-39024	5901	12-15-70	ABS-5236-8	20"x12"	622'-6"	"	7-17-71	"	Vault	

PUMPING EQUIPMENT

Well No.	D.W.T./Vac.	Actual Rated Capacity(GPM)	Authorized Capacity(GPM)
1	D.W.T.	1100	1200
2	D.W.T.	1100	1200
3	D.W.T.	1100	1200

CHEMICAL TREATMENT

Lime (For Corrosion Control) Yes
Calgon (For Iron Inhibition) Yes
Chlorination Type: Permanent Gas

REMARKS

* S & S - Underground Substructure & Prefabricated Superstructure

LOCUST DRIVE WELL FIELD & PUMPING STATION

Location: Northwest Corner of Pine Acres Boulevard &
Locust Drive, North Brightwaters

Plot Plan Drawing No.: ZA-128-1

STATION DATA

Area of Site: 4.001 Acres
Type of Structure: Brick & Concrete Block
Telemetering: Yes

Standby Diesel Generator Set Installed: 60-80 KW
Fence Enclosure Type: Chain Link

WELL DATA

S.C.W.A. Well No.	D.E.C. Well No.	W.S.A. No.	Decision Date	Well Dwg. No.	Dia.	Depth	Type	Date in Service	Status	Type of Structure	Remarks
1	S-15898	3193	4-2-57	ZA-128-17	16"	128'-6"	Rotary	5-7-58	Permanent	In Building	Pump Replaced 5-4-
2	S-16175	3266	8-1-57	ZA-136-2	16"	130'-0"	"	7-11-58	"	Vault	See Note Below
3	S-36460	5773	11-6-69	ABS-4886-6	20"x12"	610'-9"	"	9 -25-70	"	"	

PUMPING EQUIPMENT

Well No.	D.W.T./Vac.	Actual Rated Capacity(GPM)	Authorized Capacity(GPM)
1	D.W.T.	500	1000
2	D.W.T.	700	1000
3	D.W.T.	1200	1200

CHEMICAL TREATMENT

Lime (For Corrosion Control) Yes
Chlorination Type: Permanent Gas
Calgon For Iron Inhibition No

REMARKS

Deep Test Boring Located on Site - S-36460T.
Note: Installed and Gravel Packed Screen Liner (March 1979).

ADAMS AVENUE WELL FIELD & PUMPING STATION

Location: East side of Adams Avenue, South of Nicoll's Road, Wyandanch

Plot Plan Drawing No.: ABL-4162-1

Station Data

Area of Site: 2.6 Acres
 Type of Structure: Brick & Conc. Block
 Telemetry: Yes

Standby Diesel Generator Set Installed: No
 Space Provided for Generator Set: Yes
 Fence Enclosure Type: Chain Link

WELL DATA

S.C.W.A. Well No.	D.E.C. Well No.	W.S.A. No.	Decision Date	Well Dwg. No.	Dia.	Depth	Type	Date in Service	Status	Type of Structure	Remarks
1	S-34030	5593	10-3-68	ABL-4362-19	16"x12"	538'-2-3/8"	Rotary	3-2-70	Permanent	In Bldg.	
2	S-34031	5593	10-3-68	ABL-4408-6	16"x12"	515'-5-5/8"	Rotary	7-5-69	"	Conc.Vault	

PUMPING EQUIPMENT

Well No.	D.W.T./Vac.	Actual Rated Capacity(GPM)	Authorized Capacity(GPM)
1	D.W.T.	1200	1200
2	D.W.T.	1200	1200

CHEMICAL TREATMENT:

Lime (For Corrosion Control): Yes
 Chlorination Type: Gas
 Calgon (For Iron Inhibition) Yes

Remarks:

INDUSTRY COURT WELL FIELD & PUMPING STATION

Location: South Side of the Long Island Rail Road R.O.W., Approximately 500 Feet
North of the Junction of North Industry & East Industry Courts, Deer Park

Plot Plan Drawing No.: ABL-3684-1

STATION DATA

Area of Site: 1.85 Acres
Type of Structure: Brick & Conc. Block
Telemetering: Yes

Standby Diesel Generator Set Installed: No.
Space Provided for Generator Set: Yes
Fence Enclosure Type: Chain Link

WELL DATA

S.C.W.A. Well No.	D.E.C. Well No.	W.S.A. No.	Decision Date	Well Dwg. No.	Dia.	Depth	Type	Date in Service	Status	Type of Structure	Remarks
1	S-40497	5973	7-19-71	ABL-5457-18	20"x12"	283'-3-7/8"	Rotary	11-6-72	Permanent	In Bldg.-	
2	S-46830	6143	8-24-72	ABL-5915-17	20"x12"	654'-5"	Rotary	10-10-74	PERMANENT	Vault	


PUMPING EQUIPMENT

Well No.	D.W.T./Vac.	Actual Rated Capacity(GPM)	Authorized Capacity(GPM)
1	D.W.T.	1200	1200
2	D.W.T.	1200	1400

CHEMICAL TREATMENT

Time (For Corrosion Control) Yes
Chlorination Type: Hypochlorinator



	TITLE: THREE MILE VICINITY MAP		
	SITE:		
	COMMERCIAL ENVELOPE MFG. CO. INC., DEER PARK, N.Y.		
	DATE: 9/29/87		
TDD: 2-8704-03		FIGURE NUMBER:	SCALE: 1" = 2000'
QUAD: GREENLAWN, N.Y.			

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

REFERENCE NO. 16

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

**PHASE 1 INVESTIGATION
Commercial Envelope Mfg. Co., Inc.
Site No. 152103
Town of Babylon, Suffolk County
Draft - May 1986**



RECEIVED

DEC 29 1986

**New York State
Department of
Environmental Conservation**

BUREAU OF HAZARDOUS
WASTE
DIVISION OF SOLID
HAZARDOUS WASTE

**50 Wolf Road, Albany, New York 12233
Henry G. Williams, Commissioner**

**Division of Solid and Hazardous Waste
Norman H. Nosenchuck, P.E., Director**

Prepared by:



**EA SCIENCE AND
TECHNOLOGY**

A Division of EA Engineering, Science, and Technology, Inc.

1. EXECUTIVE SUMMARY

The Commercial Envelope Mfg. Co., Inc. (CEM) site (New York I.D. No. 152103 and PA I.D. No. New) is an envelope manufacturing facility located on a 7-acre property approximately 0.5 mi east of the intersection of Commack Road and Grand Boulevard in the Town of Deer Park, Suffolk County, New York (Figures 1-1 and 1-2, and Photos 1-16). The site is operated by Mr. Ira B. Kristel, President of CEM. The property is owned by the Town of Babylon's Industrial Development Agency, which financed the purchase of the property for CEM.

The company has operated from 1976 until the present, and reportedly generates chemical wastes such as solvents, ink, and glue. The major sources of industrial wastewater at the facility include a print-wash station, a photographic operation, and miscellaneous wash sinks. Frequent inspections and sampling by the Suffolk County Department of Health Services (SCDHS) identified three areas that contained elevated levels of solvents and heavy metals: (1) three leaching pools, (2) three ink waste storage tanks, and (3) an area adjacent to a trash compactor. It was learned during a search warrant investigation in 1985 that two leaching pools were connected to the photoroom and the printwash station by two underground pipes. An area near these leachpools, where purple-colored water was observed bubbling up through the ground, was also investigated at this time. It was established that the "bubbling-pool" was some sort of pit. At a later date, it was established that this pit was actually a third leaching pool which received wastes through a hole in a pipe which lead to the two other leach pools. This pool was found to contain approximately 1,500 gal of liquid and 31 55-gal drums of sludge. The three ink waste storage tanks, which were found to hold material enroute to the incinerator, were excavated.

Combined, the tanks were found to contain approximately 3,000 gal of liquid and 100 x 55 gal of sludge. The third area of concern, the area adjacent to a trash compactor, was filled with liquid and sludge which "oozed" out of the trash compactor as it compressed trash. A storm drain leach pool in the vicinity was found to be contaminated with solvents and metals. In 1985, following numerous court orders by SCDHS stipulating that the contaminated sites be cleaned up, two of the leaching pools were cleaned and filled with sand. The remaining pool, the ink waste storage tanks, and the storm drain near the trash compactor were cleaned in early 1986 after the company was convicted for unlawful discharge on 30 January 1986.

Site Coordinates:

Latitude: 40° 45' 45"
Longitude: 73° 18' 13"

COMMERCIAL ENVELOPE
MFG. COMPANY, INC.

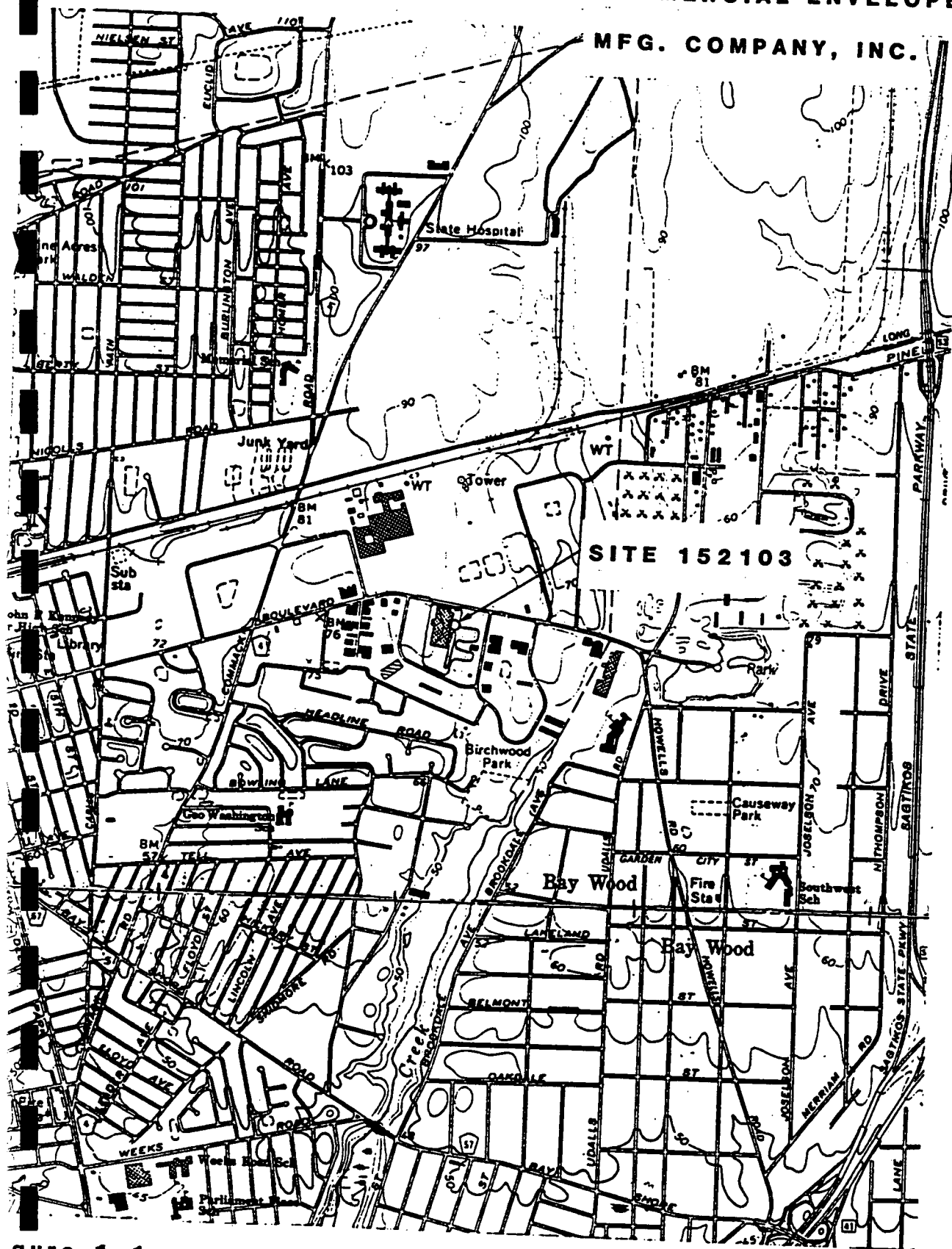
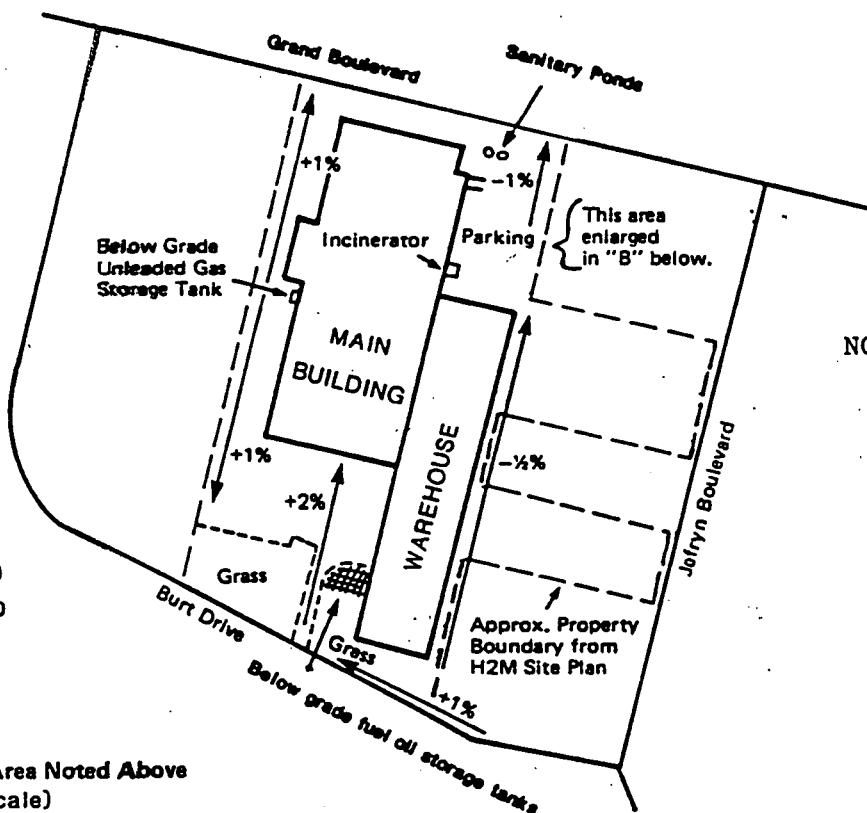


Figure 1-1.

GREENLAWN & BAY SHORE WEST QUADS.

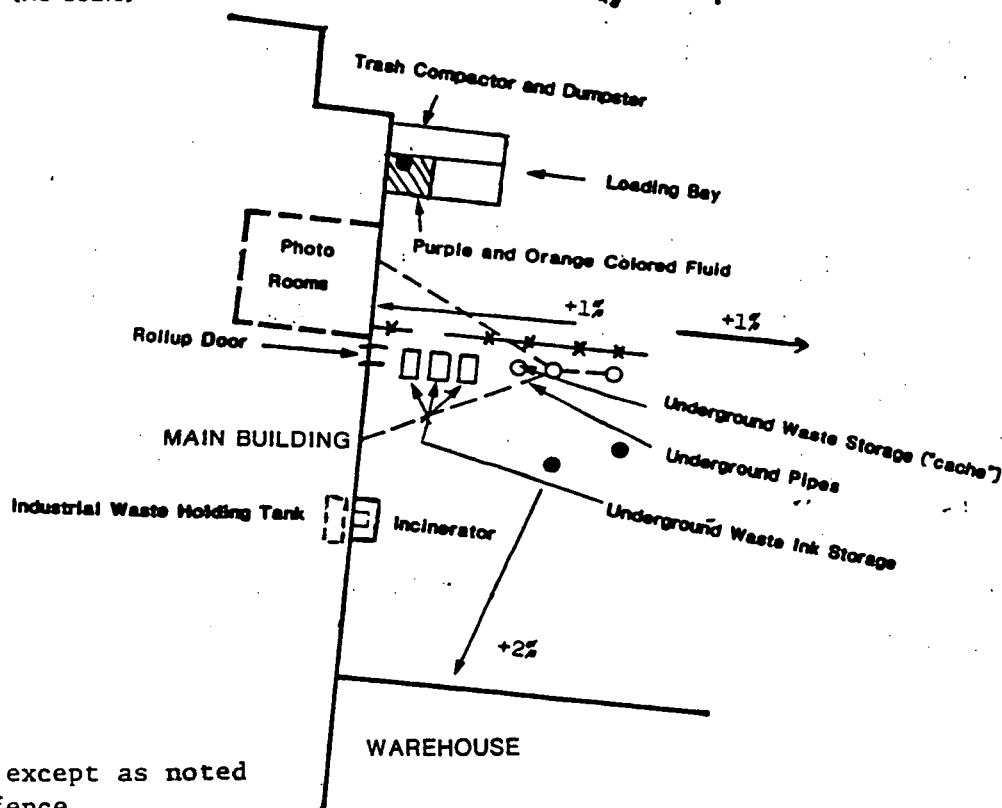
Scale 1:24,000

PROX. SCALE (FEET)
200 400



NOTE: Base map modified from H2M site plan and SCDOP Spring 1980 Air Photo No. E640. N4512

Enlargement of Area Noted Above
(No scale)



drain
pool, except as noted
ink fence

Figure 1-2. Site sketch. Commercial Envelope Manufacturing Co., Inc., 23 January 1986.

4. SITE ASSESSMENT - COMMERCIAL ENVELOPE MFG. CO., INC.

SITE HISTORY

Commercial Envelope Mfg Co., Inc. (CEM) site is an envelope manufacturing facility located approximately 0.5 mi east of the intersection of Commack Road and the Long Island Railroad on Grand Boulevard in the Town of Deer Park, Suffolk County, New York (Figures 1-1 and 1-2). The property is owned by the Babylon's Industrial Development Agency (IDA). This agency is listed on the deed as the current owner because CEM obtained a loan from the IDA to purchase the property. At present, CEM is repaying the loan. The site is operated by Mr. Ira B. Kristel, President of CEM (Appendixes 1.1-1 through 1.1-4). The envelope manufacturing firm, which has been at the site since approximately 1976, is also involved in printing and photographic operations. Prior to the main building's construction in 1973 until 1976, the site was occupied by Alvin Seal, Inc., a company which produced such items as door frames and metal fencing (Appendixes 1.1-1 and 1.1-5).

Major sources of industrial wastewater at the facility include a printing station, a photographic operation, and miscellaneous wash sinks, all of which are located in the main building (Appendix 1.1-6). A warehouse onsite, built in 1984, is used primarily for the bulk storage of paper with a small area used for job lot printing on "multilith" type machines (Appendix 1.1-7). Operations generate various hazardous wastes including solvents, glues, and inks. The company claimed that all such wastes were channeled into a 2,000-gal, above-ground storage tank located along the eastern wall inside the main

building. The wastewaters are then disposed of by high temperature incineration in a liquid waste disposal system located outside the building (Appendix 1.1-6). However, the Suffolk County Department of Health Services (SCDHS) has inspected the site and performed sampling many times since 1981, and has noted three areas where hazardous wastes have been disposed other than by incineration (Appendixes 1.1-3 and 1.1-8 through 1.1-12).

SCDHS personnel observed purple-colored liquid bubbling up through the ground on the east end of the building in October 1984. At that time SCDHS introduced dye in the hand-wash sink and the sump in the photo room. However, the dye did not appear in the inside waste holding tank and was not observed anywhere (Appendixes 1.1-3 and 1.1-11). On 17 June 1985, SCDHS site inspection identified a small pipe in the floor in the vicinity of CEM's "ink pot washer." A site representative confirmed that this pipe lead beneath the floor, continued east of the building and discharged in the two eastern-most leach pools which had since been purged and backfilled with sand (Appendix 1.1-12). On 9 July 1985, a Special Investigation-Environmental Crimes Unit from the District Attorney's office presented CEM with a search warrant to locate and dye-test pipes reportedly present in the CEM's main building and which discharged wastewater to leach pools located east of the building (Appendixes 1.1-13 and 1.1-14). Also present were representatives from the SCDHS. Dye-tests were performed along various portions of the pipes (previously plugged in some portions) originating in the "photo room" area (red dye) and the "ink pot wash machine" (green dye). Additionally, the previously purged and backfilled inline leach pool (east of the building) was reopened and excavated 6-7 ft to expose two discharge pipes. Red dye was observed to enter this leach pool through one of the discharge pipes; the green dye was not observed to enter

5 Preliminary HRS
5.1 Narrative Summary
5.2 Location
5.3 HRS Northeast

this leach pool. Because purple fluids had been observed to "bubble up" through the ground (about 6 ft west of the reopened leach pool), a break in the buried pipe line was suspected. Thus, an excavation was begun in that area, and uncovered a void (pit) of unknown total depth containing green-colored liquid and explosive vapors. A 4- to 6-in. diameter white pipe was observed to cross over the pit, and was discharging green-dyed liquid into the pit at a steady rate. A sample was collected from this pit when the explosive vapor concentrations lessened at the surface. Because of elevated explosive vapor concentrations and low percent oxygen measurements in the pit, the pit was not completely exposed; but rather the pit was covered with wood and the remainder of the excavation filled with sand to ground surface. Additionally, during this investigation, purple colored liquid was observed and sampled in the loading dock adjacent to the trash compactor. Analytical results of the sample collected from the pit indicate the presence of a variety of solvents (Appendix 1.1-14). In February 1986, it was determined that the pit was actually a third leach pool. Solid and liquid wastes were entering the pool through a hole in the PVC pipe which had entered the leaching pools east of this pool (Appendix 1.1-3).

The second problem area is a trash compactor situated in a loading dock on the northeast corner of the building. The area adjacent to the compactor has been observed to be filled with liquid and sludge that "oozes" out of the compactor as it compresses trash (Appendixes 1.1-3 and 1.1-14). The "ooze," which flows into a nearby storm drain pool, was found to be contaminated with solvents and metals. An overflow pool from the storm drain pool was identified but found by CDHS to be clean (Appendix 1.1-3). The contaminated storm drain pool was

pumped out, pressure-washed, and backfilled with cement slurry (Appendixes 1.1-1 and 1.1-3). Later inspections found that the loading dock area adjacent to the compactor was again filled with contaminated liquids which were removed by a licensed hauler (Appendix 1.1-3).

The third area of concern, located between the leaching pools and the building on the eastern side, is the three underground storage tanks intended to hold material going into the incinerator. Both the three tanks, estimated to hold 1000 gal each, and the soil surrounding the tanks were found to be contaminated, primarily with metals, although some solvents were found in the ink waste tanks (Appendix 1.1-3).

SCDHS has also sampled two sanitary pools located on the northeast corner of the main building. These pools were found to be clean (Appendix 1.1-3).

SCDHS has repeatedly initiated legal proceedings against CEM in an effort to have the three aforementioned areas cleaned up (Appendixes 1.1-8, 1.1-15, and 1.1-16). As part of one consent order, CEM applied for and received a permit to operate the high temperature incinerator (Appendixes 1.1-7, 1.1-17, and 1.1-18). In the application, it was stated that six wastewater constituents to be disposed of in this manner: lead oxide, silver salts, copper salts, nickel salts, particulates, and hydrogen chloride. CEM has also been in violation for having both improper and unpermitted storage areas (Appendix 1.1-19). A SCDHS inspection of 23 September 1985 noted numerous 55-gal drums scattered throughout the plant (Appendixes 1.1-20 and 1.1-21).

5. Preliminary HRS

5.1 Narrative Summary

5.2 Location

5.3 HRS Worksheets

After several orders to clean up the pools, the two leaching pools directly connected to the "photo-room" and "ink-pot" wash machine were cleaned and filled with sand (Appendix 1.1-14). SCDHS also directed CEM to clean out the pit below the "bubbling-pool" (Appendix 1.1-22). Under a felony conviction in 1986, CEM scavenged and backfilled this pit which happened to be a third leach pool in-line with the pools that were connected to the photo room and ink-pot wash machine (Appendix 1.1-3). In addition, 3,000 gal of liquid and approximately 100 x 55 gal of sludge were removed from the three underground ink waste storage tanks. In April 1986, the three tanks and all influent pipes were filled with cement. At that time, it was also discovered that there was soil contamination along the west side of the excavation (Appendix 1.1-3). CEM has been ordered by SCDHS to remove this contamination.

In addition, it was noted during EA's site inspection, mid-January 1986, that cleaning up a recent fuel oil spill at the CEM facility was in progress. According to SCDHS, an oil distributor had mistakenly pumped 9,300 gal of fuel oil down an observation well on site (Appendix 1.1-23). CEM has since indicated that Slomins, the oil company, has to CEM's knowledge recovered the spilled oil, removed contaminated soil, and backfilled the area with sand (Appendix 1.1-1).

4.2 SITE TOPOGRAPHY

The Commercial Envelope Mfg. Co., Inc. site is located approximately 5 mi inland from Great South Bay on the southern side of Long Island at an elevation of approximately 75-80 ft above mean sea level. The regional slope of terrain is to the south (Figure 1-1). The CEM property itself is largely flat

COMMERCIAL ENVELOPE MFG. CO., INC.
TOWN OF DEER PARK, SUFFOLK COUNTY

The Commercial Envelope Mfg. Co., Inc. (CEM) site is an envelope manufacturing facility located on a 7-acre property in the Town of Deer Park, Suffolk County, New York. Mr. Ira B. Kristel, president of CEM, operates the site. The Town of Babylon Industrial Development Agency, which financed the purchase of the property for CEM, is the current owner. CEM operated from 1976 until the present. The major sources of industrial wastewater at the facility include a print-wash station, a photographic operation, and miscellaneous wash sinks. Frequent inspections and sampling by the Suffolk County Department of Health Services (SCDHS) have identified three areas that contained elevated levels of solvents and heavy metals: (1) three leach pools, (2) three ink waste storage tanks, and (3) an area adjacent to a trash compactor. In 1985, SCDHS found that two leach pools were connected to the photoroom and the printwash station by underground pipes. It was later established that a third leach pool received wastes through a hole in a pipe which lead to the two other leach pools. This pool was found to contain approximately 1,500 gal of liquid and 31 55-gal drums of sludge. The three ink waste storage tanks, which held material en-route to the incinerator, were excavated and were found to contain approximately 3,000 gal of liquid and 100 x 55 gal of sludge. The area adjacent to a trash compactor was filled with liquid and sludge which "oozed" out of the trash compactor as it compressed trash. A storm drain leach pool in the vicinity was found to be contaminated with solvents and metals. In 1985, following numerous court orders by SCDHS stipulating that the contaminated sites be cleaned up, CEM had two of the leach pools cleaned and filled with sand. The remaining pool, the ink waste storage tanks, and the storm drain near the trash compactor were cleaned in early 1986.

6. ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS

Appendix 1

1. ADEQUACY OF EXISTING DATA

Available data are considered insufficient to prepare a final HRS score for the Commercial Envelope Mfg. Co., Inc. site. There is documentation of onsite hazardous waste disposal in underground tanks and leach pools which have reportedly been cleaned out and backfilled with clean sand. Although two monitoring wells were installed recently for CEM at the site, they are reportedly both located downgradient of the aforementioned subsurface contaminant source areas. Therefore, although ground-water samples have reportedly been collected and analyzed by CEM's consultant, there are no samples of ambient (upgradient) ground-water conditions.

2. RECOMMENDATIONS

In order to prepare a final HRS score for this site, analytical data regarding the quality of upgradient (ambient) ground water will be necessary. CEM is reportedly in the process of obtaining approval from the SCDHS for an upgradient monitoring well location. Collection and analysis of ground water from three monitoring wells by CEM's consultant could then provide confirmation of release of contaminants from the site to ground water (one purpose of a Phase II study). The results of the monitoring well installations and future ground-water sample analyses performed for CEM should be considered and evaluated prior to developing an NYSDEC Phase II investigation. Therefore, at this time a Phase II study by NYSDEC is not recommended.

REFERENCE NO. 17

NUS CORPORATION

0026.C
02.8704.03

TELECON NOT.

CONTROL NO:

DATE:

7/16/87

TIME:

0950 HRS

DISTRIBUTION:

COMMERCIAL ENVELOPE MFG
TDD 02-8704.03

BETWEEN:

J. FICHERIA

OF:

NYS DEC-REG I
DIV OF HAZ WASTE

PHONE:

(516) 751-7900

AND:

E. L. LEONARD

(NUS)

DISCUSSION:

RE: RCRA PERMIT

AS OF 7/8/86 THEY WERE LISTED AS A
GENERATOR. AS A GENERATOR THEY NEED
NOT BE PERMITTED, BUT MUST ABIDE
BY RCRA REGULATIONS FOR A GENERATOR.
EPA ID # NYD 002030690.

ACTION ITEMS:

REFERENCE NO. 18

0033-11
02-3704-03

NUS CORPORATION
SUPERFUND DIVISION

291

PROJECT NOTES

TO: COMMERCIAL ENVELOPE FILE DATE: 7/29/87
FROM: E. LEONARD COPIES:
SUBJECT: PAST AND PRESENT PROPERTY OWNERS
REFERENCE: 02-3704-03

COMMERCIAL ENVELOPE MFG. CO. INC.

900 GRAND BLVD

DOOR PARK, NY 11729

DIST: 100

SET: 67

BLOCK: 01

LOTS: 22.02, 24.55 & 24.64

LOT: 22.02

DEC 1984: TOWN OF BABYLON INDUSTRIAL DEVELOPMENT
AGENCY SOLD THE PROPERTY TO COMMERCIAL
ENVELOPE MFG. CO. INC.

¹⁹⁸³
NOV ~~1984~~ ¹⁹⁸³: COMMERCIAL ENVELOPE MFG. CO. INC. SOLD THE
PROPERTY TO TOWN OF BABYLON INDUSTRIAL
DEVELOPMENT AGENCY.

^{REALTY, INC.}
NOV 1983: ASM ~~REALTY~~ ^{REALTY, INC.} CORP SOLD THE PROPERTY
TO COMMERCIAL ENVELOPE MFG. CO.

AUG 1981: COMMERCIAL ENVELOPE MFG. CO. INC
SOLD THE PROPERTY TO ASM REALTY
CORP.

MAY 1977: DORO OPERATING CORP SOLD THE PROPERTY
TO COMMERCIAL ENVELOPE MFG. CO INC.

PRIOR TO 1977 THE PROPERTY WAS OCCUPIED
BY ALWIN SEAL INC. (1973-1977)

LOT: 24.55

DEC 1986: TOWN OF BABYLON ^{INDUSTRIAL} DEVELOPMENT AGENCY
SOLD THE PROPERTY TO COMMERCIAL
ENVELOPE MFG. CO. INC.

NOV 1983: COMMERCIAL ENVELOPE MFG. CO. INC SOLD
THE PROPERTY TO TOWN OF BABYLON INDUSTRIAL
DEVELOPMENT AGENCY.

NOV 1983: ASM ^{REALTY} ~~REALTY~~ CORP SOLD THE PROPERTY
TO COMMERCIAL ENVELOPE ^{ELL} ~~MFG.~~ MFG CO.

APR 1982: FRED FRANK INC. SOLD THE PROPERTY TO
ASM REALTY CORP.

OCT 1979: MELVILLE INDUSTRIAL ASSOC. SOLD THE
PROPERTY TO FRED FRANK INC.

LOT: 24.64

DEC 1986: TOWN OF BABYLON INDUSTRIAL DEVELOPMENT
AGENCY SOLD THE PROPERTY TO
COMMERCIAL ENVELOPE MFG. CO.

TO: COMMERCIAL ENVELOPE FILE DATE: 7/29/81
FROM: B. LEONARD COPIES:
SUBJECT: PAST + PRESENT PROPERTY OWNERS
REFERENCE: 02-8704-03

NOV 1983: COMMERCIAL ENVELOPE MFG. CO SOLD THE
PROPERTY TO TOWN OF BABYLON
INDUSTRIAL DEVELOPMENT ASSOC./

NOV 1983: ASM ~~REALTY~~ ^{REALTY} CORP SOLD THE PROPERTY
TO COMMERCIAL ENVELOPE MFG. CO. INC

JUL 1981: KILSON HOLDING CORP SOLD THE
PROPERTY TO ASM REALTY CORP

MAY 1981: BGM ~~REALTY~~ ^{REALTY} CO. SOLD THE
PROPERTY TO KILSON HOLDING CORP.

JUL 1980: MELVILLE INDUSTRIAL ASSOC. SOLD
THE PROPERTY TO BGM REALTY
CO.

Above information acquired from Town
of Babylon, Assessor Office

REFERENCE NO. 19

COUNTY OF SUFFOLK



OFFICE OF DISTRICT ATTORNEY

PATRICK HENRY
DISTRICT ATTORNEY

ADDRESS REPLY TO:
SPECIAL INVESTIGATION UNIT
XXXXXXXXXXXXXXXXXXXX

Environmental Crime Unit

March 31, 1986

Dr. David Harris, Commissioner
Suffolk County Department of
Health Services
225 Rabro Drive East
Hauppauge, New York 11788

Re: Commercial Envelope Manufacturing
Company, Inc.
900 Grand Blvd., Deer Park

Dear Dr. Harris:

On January 30, 1986, the above company pled guilty to one count of Unlawful Discharge of Hazardous Waste in the Second Degree, a class E felony under the ECL, and 100 violations of Section 1217 of the Suffolk County Sanitary Code. Today, the company was sentenced to pay a fine of \$25,000.00 to the hazardous waste remedial fund under its felony conviction, and an additional \$25,000.00 to the County of Suffolk under the Sanitary Code convictions.

This marks the second case disposed of pursuant to District Attorney Henry's policy of negotiating settlements that will permit the County to receive half of any fine imposed. A copy of this letter, as well as Commercial Envelope's check in the amount of \$25,000.00 (#72050) made out to the County of Suffolk is being sent to Deputy Commissioner O'Brien.

In addition to these fines, as a condition of the plea offer, Commercial Envelope entered into an Order on Consent with your Department in which they agreed to perform a field investigation and clean-up. That agreement is currently being carried out under your supervision.

At the risk of sounding like a broken record, I must once again draw your attention to the superb work of David Obrig and JoAnn Johnson on this case, both prior to our involvement, and during the execution of a search warrant. Their tenacious refusal to permit Commercial Envelope to ignore lawful orders of the Department created an administrative file that convinced the criminal lawyer to negotiate a settlement without our

DR, DAVID HARRIS
March 31, 1986
PAGE TWO

having to go to the grand jury. In addition, Ken Hill and Kavasery Raja's willingness to interrupt their busy schedules to take the samples from our search warrant and promptly analyze and report their results was, as always, much appreciated. Their reports are always our strongest tool in plea negotiating.

Very truly yours,

Fred
Frederick Eisenbud
Assistant District Attorney

cc:

Patrick Henry
Paul O'Brien
David O'brig
JoAnn Johnson

National Bank of North America 79 DEER PARK AVENUE DEER PARK, N.Y. 11729		COMMERCIAL ENVELOPE MFG. CO. INC. 900 GRAND BOULEVARD DEER PARK, N.Y. 11729		CHECK NO. 132 280 72050
DATE 31 Mar 86	PAY THIS AMOUNT ***** 25,000. DOLLARS 00 CENTS			AMOUNT OF CHECK \$25,000.00
County of Suffolk				<i>[Signature]</i> AUTHORIZED SIGNATURE

⑈072050⑈ ⑈028000325⑈ 2228 27 4713⑈

National Bank of North America
1979 DEER PARK AVENUE
DEER PARK, N.Y. 11729

COMMERCIAL ENVELOPE MFG. CO. INC.
900 GRAND BOULEVARD
DEER PARK, N.Y. 11729

CHECK NO.

72050

DATE

31 Mar 86

PAY THIS AMOUNT

***** 25,000. DOLLARS 00 CENTS

AMOUNT OF CHECK

\$25,000.00

County of Suffolk

AUTHORIZED SIGNATURE

⑈072050⑈ ⑆028000325⑆ 2228 21 4713⑈

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
CASH RECEIPT

855665

RECEIVED Twenty five thousand dollars

AMOUNT [\$25,000]

DATE 4/2/86

FOR
NAME

CENTER PROVIDING SERVICE

REFERENCE NO.

☐ = PAYMENT FOR PREVIOUS SERVICE

FROM

Commercial Envelope Mfg. Co.

900 Grand Blvd.

Deer Park, NY 11729

CITY

STATE

ZIP CODE

☐ HEALTH CENTER

☐ HHS

☐ MH CEN

☒ ENVIRONMENTAL

☐ DA

☐ TB

☐ PHCP

☐ FP

☐ OPR

FORM OF PAYMENT

72050

☐ CERTIFIED CHECK ☒ CHECK ☐ CASH

OTHER

REC'D.

X
BY

COPY 1 PAYER

COPY 2 ADMINISTRATION

COPY 3 PAYEE

REFERENCE NO. 20

NUS CORPORATION

0025.2
02.8704.03

TELECON NOTE

CONTROL NO:

DATE:

7/16/87

TIME:

SEE BELOW

DISTRIBUTION:

COMMERCIAL ENVELOPE MFG
TDD 02-8704.03

BETWEEN:

G. WATT

OF:

SCHD -
WATER RESOURCES

PHONE:

(516) 451.4648

AND:

E. L. LEONARD

(NUS)

DISCUSSION:

RE: SPDES PERMIT.

1350 HRS MR ^{ELL}WATT WILL LOOK UP FILE
AND GET BACK TO ME.1501 HRS COMMERCIAL ENVELOPE MFG HAD A SPDES
PERMIT, BUT IT EXPIRED 12/7/84.
PERMIT WAS FOR DISCHARGING COOLING
WATER ONLY, NOT FOR INDUSTRIAL WASTE.
PERMIT # 0177113. DISCHARGE TO
GROUNDWATER.PERMIT NOT ^{ELL}RENEWED. CURRENTLY
NO ACTIVE DISCHARGE PERMIT.

ACTION ITEMS:

REFERENCE NO. 21

County, EXHIBIT 2
DATE 11/16/82 1982
JESSICA HUBSCHMAN

COUNTY OF SUFFOLK
DEPARTMENT OF HEALTH SERVICES

.....
In the Matter of the Alleged :
Violation of Article 12 :
of the Suffolk County Sanitary Code :
by :
Commercial Envelope Manufacturing :
Company, Inc. :
900 Grand Boulevard :
Deer Park, NY 11729 :
Respondent. :
.....

ORDER ON CONSENT
NO. IW 82-49
DATE: 9/16/82

GENERAL PROVISIONS

This Department alleges that the above-named Respondent has failed to comply with the provisions of the Suffolk County Sanitary Code as specified below. Because of such alleged non-compliance, the above-named Respondent consents and agrees to the issuance of this Order on Consent, and agrees to be bound by the terms, conditions and provisions stated herein.

Respondent understands that by entering into the Order on Consent with the Department, he is affirmatively and voluntarily waiving his right to a formal adjudicatory proceeding with respect to the matters herein addressed. Although the Department will not pursue further enforcement action with respect to the specific alleged violations of law set forth below if the above-named Respondent enters into this Order and abides by its terms, Respondent understands that the Department is not agreeing to forbearance from pursuing enforcement action regarding alleged violations not addressed by this Order. Moreover, Respondent understands that notwithstanding his execution of this Order on Consent, his failure to strictly comply with all of the terms, conditions and provisions herein contained will revive the Department's rights regarding the violations alleged as set forth below subject to a set-off for any penalties already paid pursuant to this Order on Consent. Furthermore, the Respondent is hereby advised that this Order on Consent, duly executed by the Respondent's agent and the Commissioner or his duly authorized representative has the force and effect of a Commissioner's Order, the violation of which is subject to penalties as provided in Section 218 of Article 2 of the Suffolk County Sanitary Code.

A modification of any of the provisions of this Order on Consent may be obtained by a timely written request demonstrating good and sufficient cause for the change or extension requested. No modification of this Order shall be effective unless and until it is specifically set forth in writing by the Department.

SPECIFICATION OF ALLEGED VIOLATIONS

It is alleged that the Respondent above-named failed to comply with the following provisions of the Suffolk County Sanitary Code as indicated below:

On May 6, 1982 and May 11, 1982 you did maintain a discharge point for toxic or hazardous materials in violation of Section 1205 (a) of Article 12.

On May 11, 1982 you did discharge toxic or hazardous materials in excess of New York State discharge standards and in violation of Section 1206 (a)(6) of Article 12.

- * That you have failed to comply with the terms (tank testing and engineering report requirements) of a Suffolk County Dept. of Health Services "Commissioner's Order" dated June 17, 1982.

SPECIFIC TERMS AND CONDITIONS

In satisfaction of the above-named Respondent's alleged violations of the Suffolk County Sanitary Code, the Respondent agrees to the entering and issuance of this Order of the Commissioner of the Suffolk County Department of Health Services, and the Respondent agrees to be bound by the terms and conditions following as well as by the above General Provisions.

1. ~~XX~~ Immediately, _____, Respondent shall have ceased all discharge of toxic or hazardous materials from Respondent's facility and thereafter to continue abatement of discharge unless and until:

a. a valid New York State Pollutant Discharge Elimination Systems (SPDES) Permit has been issued for such discharge, and,

b. Respondent's industrial discharge conforms to the discharge standards promulgated in the New York State Environmental Conservation Law and pursuant to any permit issued therefrom.

1a. Toxic or hazardous materials as referred to herein are defined in Article 12, Section 1203(k) of the Suffolk County Sanitary Code as any substance, solution or mixture, thereof which because of its quality, concentration, physical chemical or infectious characteristics may present a potential hazard to human health or drinking water supply quality if discharged to the land or waters of Suffolk County. This includes but is not limited to the list of hazardous substances found in Part 116, Title 40 of the Code of Federal Regulations, acids and alkalies beyond the pH range of 6.5 - 8.5, heavy metal wastes and solutions, petroleum products including fuels and waste oil, organic solvents and any solid material which if exposed to water will partially dissolve forming a toxic or hazardous liquid.

Date of
Compliance

SPECIFIC TERMS & CONDITIONS (con't.)

2. By October 30, 1982, the Respondent shall submit to the department a written report which details the Respondent's present procedures for control and elimination of accidental and/or intentional discharges or spills of toxic or hazardous materials at the Respondent's facility. This report shall address standard operating procedures, instructions and/or training which is being provided to the Respondent's employees for the purpose of preventing the aforementioned illegal discharges or spills.
3. Immediately, the Respondent agrees to provide the department with copies of all the Respondent's scavenger receipts for "pick-ups" of toxic or hazardous materials from the Respondent's facility for the period of time extending from September 13, 1982 to March 13, 1983. AND TO CONTINUE TO PROVIDE
- 4A. By October 30, 1982, the Respondent shall have submitted to the department an approvable engineering report which details: all industrial processes at the Respondent's facility and all toxic or hazardous materials being used or stored at the Respondent's facility. The aforementioned report shall address the Respondent's proposal for bringing the Respondent's storage of toxic or hazardous materials in drums, tanks, vats, containers, etc., into full compliance with the provisions of Article 12 of the Suffolk County Sanitary Code.
- 4B. Any questions concerning Article 12 storage facility requirements should be addressed to Mr. Peter Akras of this department at phone number (516) 451-4649.
- 5A. By October 30, 1982 the Respondent shall have tested its three (3) subsurface holding tanks for leaks. The aforementioned leak testing shall be by a method and procedure acceptable to the department.
- 5B. The Respondent agrees to notify the department at least two week days prior to the date of tank testing so that department representatives may witness the aforementioned tank testing.
- 5C. Any questions concerning tank testing procedures should be addressed to Mr. Alex Santino, P.E. of this department at phone number (516) 451-4640.
6. That in satisfaction of the alleged violations herein, in addition to the above terms, provisions and conditions,

(4)

SPECIFIC TERMS & CONDITIONS (con't.)

6. (continued)

Respondent agrees to pay a civil penalty of One Thousand (\$1,000) Dollars, but that Three Hundred (\$300) Dollars of the civil penalty shall be suspended and ultimately discharged on September 13, 1983 contingent upon Respondent's compliance with the terms, conditions and provisions of this Order on Consent. The remaining Seven Hundred (\$700) Dollar portion of the civil penalty shall be paid to the Department of Health Services and shall be remitted with the return of this Order on Consent duly executed (signed and notarized) by the Respondent.

CONSENT BY RESPONDENT

The Respondent herein named acknowledges the authority and jurisdiction of the Commissioner of the Suffolk County Department of Health Services to issue the foregoing Order on Consent, and Respondent voluntarily waives public hearing in this matter and agrees to be bound by the terms, conditions and provisions of this Order of the Commissioner.

Dated October 3, 1982

Respondent Commercial Envelope Mfg. Co.

By: (signature) [Signature]

(printed) Alan J. Kristel

Title Vice-President

STATE OF NEW YORK)
) SS.:
COUNTY OF SUFFOLK)

On the 8th day of October, 1982, before me personally came Alan J. Kristel to me known, who being duly sworn, deposed and said that he resides at

900 Grand Blvd, Deer Park, New York 11729
that he is the Vice-President of Respondent corporation, and that he signed his name as authorized by said corporation with full authority to do so.

[Signature]
NOTARY PUBLIC

PAUL CREDITOR
Notary Public, State of New York
No. 02CR4727041
Qualified in Suffolk County
Commission Expires March 30, 1984

CONSENT BY COMMISSIONER

The Commissioner of the Suffolk County Department of Health Services agrees to waive further administrative enforcement action against the Respondent named herein, and the Commissioner agrees to accept the Respondent's consent to the entry and issuance of this Order in full satisfaction of the Department's allegations herein listed, PROVIDED THAT the Respondent duly executes this Order and strictly adheres to all of its terms, conditions and provisions.

Dated: 10/19/82

Hauppauge, New York

[Signature]

David Harris, M.D., M.P.H.
Commissioner
Suffolk County Department
of Health Services

By:

COUNTY OF SUFFOLK



PETER F. COHALAN
SUFFOLK COUNTY EXECUTIVE

cc: J. Soderberg
Commercial Envelope
Eder Associates

DEPARTMENT OF HEALTH SERVICES

DAVID HARRIS, M.D., M.P.H.
COMMISSIONER

March 7, 1986

HAND DELIVERED

Gold & Watchel
780 Third Ave.
New York, NY 10017

Attn: Watchel, Esq.

Re: Commercial Envelope

Gentlemen:

In reference to the Order on Consent (IW 85-67) for Commercial Envelope, be advised that item 5 is outstanding. Commercial Envelope has not provided documentation or sample results showing that the three (3) underground ink waste tanks have been properly abandoned in accordance with Article 12 of the Suffolk County Sanitary Code.

As per Article 12, Section 1210, underground tanks must be cleaned of all residual toxic/hazardous materials and either removed from the ground or filled with clean sand or concrete. A Department representative must be present during abandonment procedures. All associated piping must also be removed or permanently filled with concrete or sand.

Commercial Envelope must prove that the three tanks are completely filled with clean sand and that no residual toxic/hazardous material is present in the tanks. If this is not proven to the satisfaction of this Department, all tank contents must be removed and properly disposed by a licensed industrial waste scavenger. The tanks must be cleaned of all residual and then properly abandoned.

Should you have any questions, please do not hesitate to contact me at 451-4649.

Very truly yours,

Vincent Frisina

Vincent Frisina, P.E.
Hazardous Material Management

VF/lr

In the Matter of the Alleged
Violation of Article 12
of the Suffolk County Sanitary Code
by Commercial Envelope Mfg. Co.
900 Grand Boulevard
Deer Park, NY 11729

ORDER ON CONSENT
NO. IW 85-67

DATE: November 12, 1985

Respondent.

GENERAL PROVISIONS

This Department alleges that the above-named Respondent, has failed to comply with the provisions of the Suffolk County Sanitary Code as specified below. Because of such alleged non-compliance, the above-named Respondent consents and agrees to the issuance of this Order on Consent, and agrees to be bound by the terms, conditions and provisions stated herein.

Respondent understands that by entering into the Order on Consent with the Department, he is affirmatively and voluntarily waiving his right to a formal adjudicatory proceeding with respect to the matters herein addressed. Although the Department will not pursue further enforcement action with respect to the specific alleged violations of law set forth below if the above-named Respondent enters into this Order and abides by its terms, Respondent understands that the Department is not agreeing to forbearance from pursuing enforcement action regarding alleged violations not addressed by this Order. Moreover, Respondent understands that notwithstanding his execution of this Order on Consent, his failure to strictly comply with all of the terms, conditions and provisions herein contained will revive the Department's rights regarding the violations alleged as set forth below subject to a set-off for any penalties already paid pursuant to this Order on Consent. Furthermore, the Respondent is hereby advised that this Order on Consent, duly executed by the Respondent's agent and the Commissioner or his duly authorized representative has the force and effect of a Commissioner's Order, the violation of which is subject to penalties as provided in Section 218 of Article 2 of the Suffolk County Sanitary Code. Further, the Department recognizes that there is no admission of fault or guilt by the Respondent concerning any alleged violation of this Order on Consent.

A modification of any of the provisions of this Order on Consent may be obtained by a timely written request demonstrating good and sufficient cause of the change or extension requested. No modification of this Order shall be effective unless and until it is specifically set forth in writing by the Department.

SPECIFICATION OF ALLEGED VIOLATIONS

It is alleged that the Respondent above-named failed to comply with the following provisions of the Suffolk County Sanitary Code as indicated below:

1. On July 7, 1985 - discharge to surface of a toxic or hazardous material (organics - location 3 on Appendix A), in violation of Article 12, Section 1205.
2. As of August 21, 1985 - failure to reclaim, recover and clean up July 7, 1985 discharge (Item 1 above) in violation of Article 12, Section 1217(c).

SPECIFIC TERMS AND CONDITIONS

In satisfaction of the above-named Respondent's alleged violations of the Suffolk County Sanitary Code, the Respondent agrees to the entering and issuance of this Order of the Commissioner of the Suffolk County Department of Health Services, and the Respondent agrees to be bound by the terms and conditions following as well as by the above General Provisions.

LIQUID AND SLUDGE REMOVAL

1. By January 6, 1986 Respondent, as per Article 12, shall have the toxic or hazardous liquid and sludge accumulated in the loading dock area (identified on Appendix A) disposed of by an industrial waste scavenger, licensed by the New York State Department of Environmental Conservation, or by on site incineration if such is acceptable to the New York State Department of Environmental Conservation.
2. Respondent shall notify the Department at least two working days (Monday through Friday) in advance of any testing or disposal of the liquid and sludge referred to in Item 1.
3. By ~~January 6~~ ^{2/24}, 1986 Respondent shall have the liquid and sludge below the area identified as ③ on Appendix A, disposed of in accordance with Items 1 and 2 above.
4. Immediately upon completion of Item 3 above, Respondent shall have the area identified as ③ on Appendix A filled to grade with clean sand.
5. By ~~January 6~~ ^{2/24}, 1986 Respondent shall provide documentation or sample results that show the three (3) underground ink waste tanks identified as such on Appendix A have been properly abandoned in accordance with Article 12. If the Department finds abandonment was improperly done, Respondent shall remove

SPECIFIC TERMS AND CONDITIONS
(continued)

all material from the three tanks.

6. Immediately upon completion of Item 5 above, Respondent shall have the material so removed, if such is necessary, in accordance with the procedures listed in Items 1 and 2 above.

TOXIC OR HAZARDOUS CHEMICALS REGISTRATION

Feb 24 OK JVS + VP

7. By ~~Jan 6~~, 1985 Respondent shall have submitted to the Department an approvable engineering report which details all toxic or hazardous materials being used or stored at the Respondent's facility.
8. The report specified in Item 7 above shall include approvable engineering plans together with application(s) for "Permit(s) to Construct an Above/Underground Toxic or Hazardous Liquid Storage Facility", to bring Respondent's facility into full compliance with Article 12 of the Suffolk County Sanitary Code.
9. The report specified in Item 7 above shall include a completed "Toxic Liquid Storage Registration Form", together with the appropriate registration fee.
10. Respondent shall complete construction in accordance with the approved permit to construct referred to in Item 8 above, on or before the expiration date of said permit.
11. Respondent shall notify the Department for the purpose of inspecting the completed construction referred to in Item 10 above.
12. Any questions concerning Article 12 or testing methods should be addressed to Mr. Vincent Frisina, P.E., of this Department at telephone number (516) 451-4649.

WASTE INCINERATOR

13. Immediately, Respondent shall take all necessary steps to insure that Respondent's industrial waste holding tank and incinerator comply with all applicable state regulations.

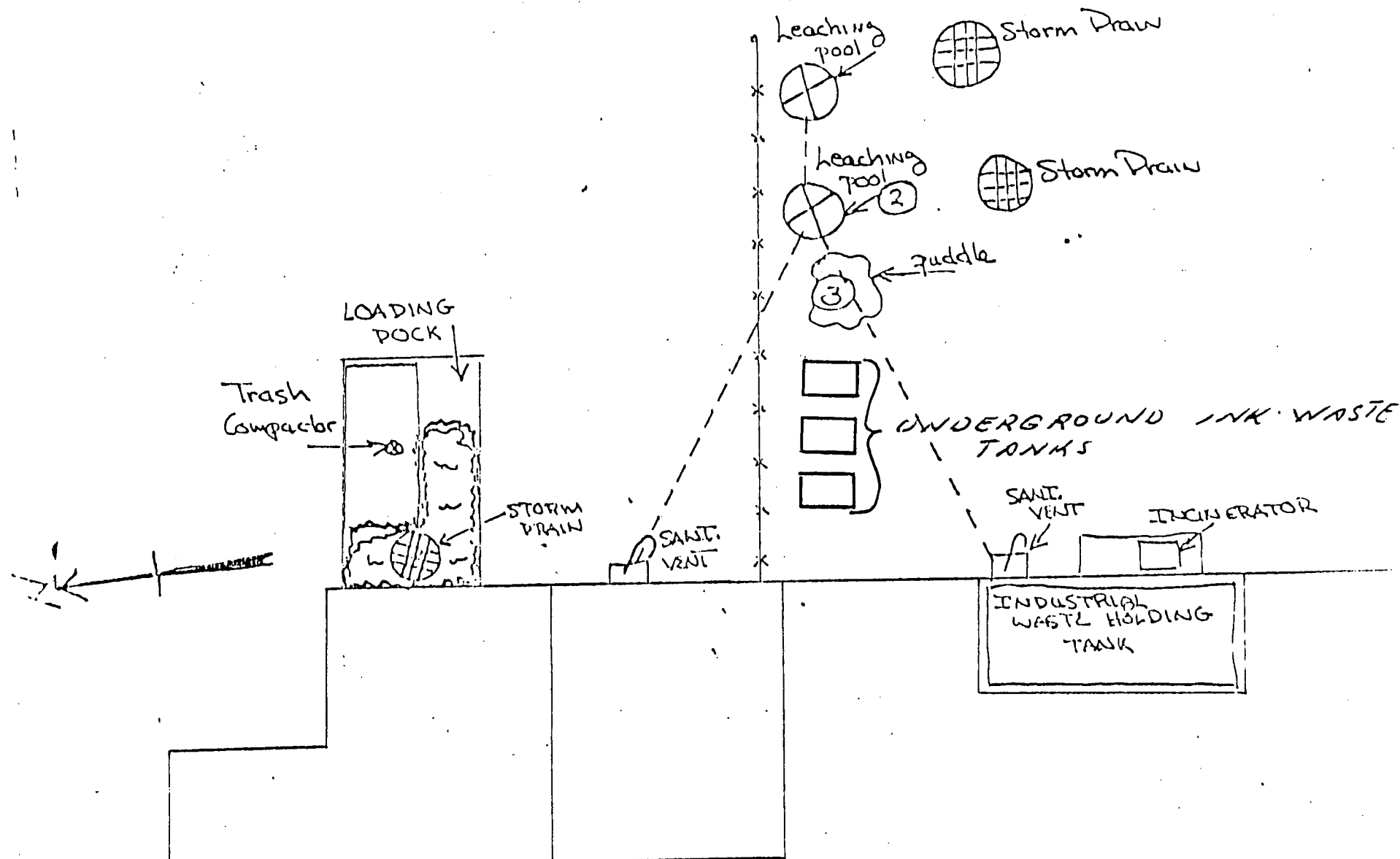
GROUNDWATER QUALITY STUDY

14. By December 2, 1985 Respondent shall submit a written proposal to this Department for determining the quality of groundwater which exists at 900 Grand Boulevard in Deer Park, New York, hereinafter known as the site, and downstream in the direction of groundwater flow from the aforementioned site.

Rec.
11/26/85

SPECIFIC TERMS AND CONDITIONS
(continued)

15. The above proposal shall provide for the installation of groundwater monitoring wells. These wells shall be installed so as to intersect the groundwater and allow sampling of same for organic solvents and metals.
16. Within sixty (60) days of Department's written approval of the aforementioned proposal, all monitoring wells are to be installed in accordance with the proposal as approved by the Department, and groundwater samples, from these wells, submitted to a New York State certified laboratory. Initial samples are to be analyzed for organic solvents and metals.
17. Within one hundred twenty (120) days of Department's written approval of the Respondent's proposal, the Respondent shall have submitted its finalized report on the quality and direction of groundwater flow at the site.
18. The report referred to in Item 17 above shall contain all laboratory analysis results of water samples taken from the monitoring wells, and the absolute groundwater elevation above mean sea level of each well.
19. If a plume of contamination attributable to site activities is found to exist, then the Respondent shall submit a proposal for defining the vertical and horizontal extent of this plume and its chemical constituents.
20. The above proposal and report shall be prepared by qualified groundwater hydrogeologist who has experience in performing an investigation for determining the existence of contamination in the groundwater.
21. The aforementioned proposal and report, as well as any questions concerning it, should be addressed to Mr. James Maloney, P.E., Suffolk County Department of Health Services, 15 Horseblock Place, Farmingville, New York 11738.
22. The Respondent agrees to permit the Department representatives access to the wells for the purpose of obtaining water samples, and to aid the Department, if necessary, in obtaining water from the wells upon reasonable notice.



Commercial Envelope Mfg. Co.
 900 Grand Blvd. Deer Park, N.Y.

APPENDIX

A

PAGE 1 OF 1

ORDER ON CONSENT # _____

REFERENCE NO. 22

HYDROGEOLOGIC CORRELATIONS FOR SELECTED WELLS ON
LONG ISLAND, NEW YORK--

A data base with retrieval program

by H. T. Buxton, D. A. Smolensky, and P. K. Shernoff

U.S. GEOLOGICAL SURVEY

Water-Resources Investigations
Report 86-4318

Prepared in cooperation with the

NASSAU COUNTY DEPARTMENT OF PUBLIC WORKS
SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
SUFFOLK COUNTY WATER AUTHORITY
NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION



Syosset, New York

1989

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PLATES

(in pocket)

Plates 1-3. Maps of Long Island showing location of wells in:

1. Kings, Queens, Nassau, and nearby Counties
2. Western Suffolk County
3. Eastern Suffolk County

HYDROGEOLOGIC CORRELATIONS FOR SELECTED WELLS ON LONG ISLAND, NEW YORK--

A data base with retrieval program

By H. T. Buxton, D. A. Smolensky, and P. K. Shernoff

ABSTRACT

Accurate delineation of Long Island's internal hydrogeologic structure is integral to the understanding and management of the ground-water system. The irregular extent and surface configuration of Long Island's seven major hydrogeologic units give the ground-water system a complex internal structure. This report presents a computerized data base of hydrogeologic correlations for 3,146 wells on Long Island and adjacent parts of New York City. The data base includes the well-identification number, the latitude and longitude of the well location, the altitude of land surface at the well, the altitude of the bottom of the drilled hole, and the altitude of the upper surface of the major hydrogeologic units penetrated by the well. A computer program is included that allows retrievals of selected types of data for all or any local area of Long Island. These data retrievals are a valuable aid to the construction of hydrogeologic-surface maps.

INTRODUCTION

Long Island extends approximately 120 mi eastward from the East River and New York Harbor to Montauk Point (fig. 1). It contains the densely populated boroughs of New York City (Kings and Queens Counties) in the west, suburban Nassau and western Suffolk Counties in the central part, and areas of farmlands and pine barrens in the east.

Ground water is the sole source of freshwater supply for the 2.6 million inhabitants of Nassau and Suffolk Counties. About 500 Mgal/d was pumped from the Island's ground-water reservoir in 1981 for public supply, commercial, and agricultural needs. This demand is expected to increase in coming years, which will make proper resource management imperative.

Long Island's geologic history has consisted of alternating periods of erosion and deposition. The result is a sequence of aquifers and confining units of irregular extent and surface configuration that give the ground-water system a complex internal structure. This irregular internal geometry has a large influence on the patterns and rates of ground-water flow. Ground-water flow is retarded where the aquifers are separated by a confining unit but is unimpeded where the intervening confining unit has been eroded or where cut-and-fill deposition makes two aquifers laterally contiguous.

Knowledge of the internal hydrogeologic structure is necessary for efficient resource management, which includes (1) designing future water-development plans; (2) selecting sites for waste disposal; (3) locating and tracking the movement of contaminants within the ground-water system; and (4) mitigating other undesirable effects of man's influence on the system, such as streamflow depletion and saltwater intrusion.

Purpose and Scope

This report presents a computerized data base of hydrogeologic-unit correlations for 3,146 wells on Long Island and adjacent parts of New York City. The data base (at end of report) gives the altitude at which the upper surface of each of seven major hydrogeologic units was penetrated and also includes the location, land-surface altitude, and depth of each well.

The following sections discuss the hydrogeologic units and the well data used to correlate surface altitudes for each unit; they also describe the format of the data base and explain each element. Also included is a description of a simple system of data retrieval that facilitates construction of hydrogeologic maps with a computer program.

A report by Smolensky and others (in press) presents a set of maps showing the configuration of the upper surface of these hydrogeologic units. The correlations presented herein were developed during construction of those maps and are consistent with their representation of the system geometry. The data-retrieval methods described in this report were used during map construction.

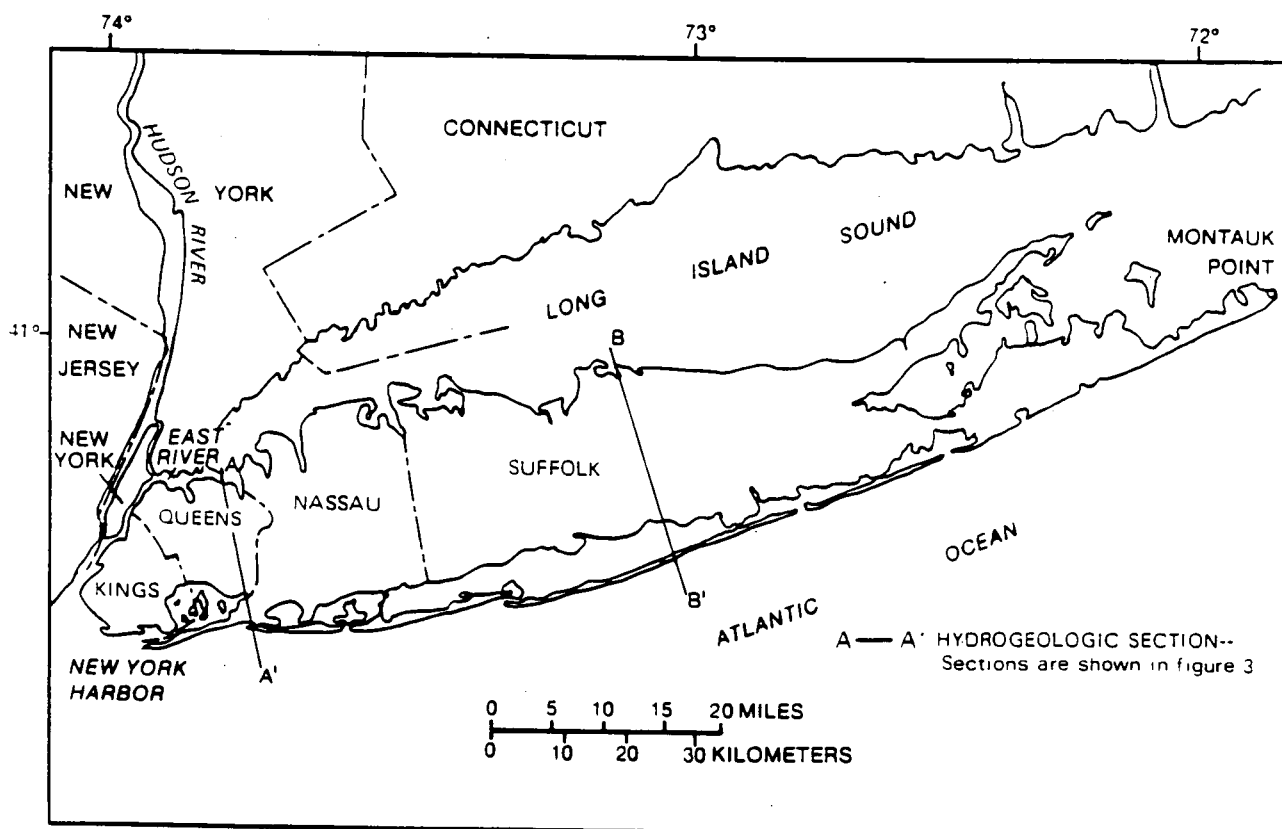


Figure 1.--Location of Long Island, N.Y., and of hydrogeologic sections depicted in figure 3.

Previous Investigations

Some previous hydrogeologic investigations that were completed on a local scale were used as a starting point for this study. Krulikas (1981) and Jensen and Soren (1971) evaluated the hydrogeology of Suffolk County, Kilburn (1980) and Kilburn and Krulikas (1986) evaluated the hydrogeology of parts of Nassau County, and Buxton and others (1981) evaluated the hydrogeology of Kings and Queens Counties.

Acknowledgments

The authors greatly appreciate support provided by the New York State Department of Environmental Conservation, Nassau County Department of Public Works, Suffolk County Department of Health Services, Suffolk County Water Authority, and New York City Department of Environmental Protection.

HYDROGEOLOGIC FRAMEWORK

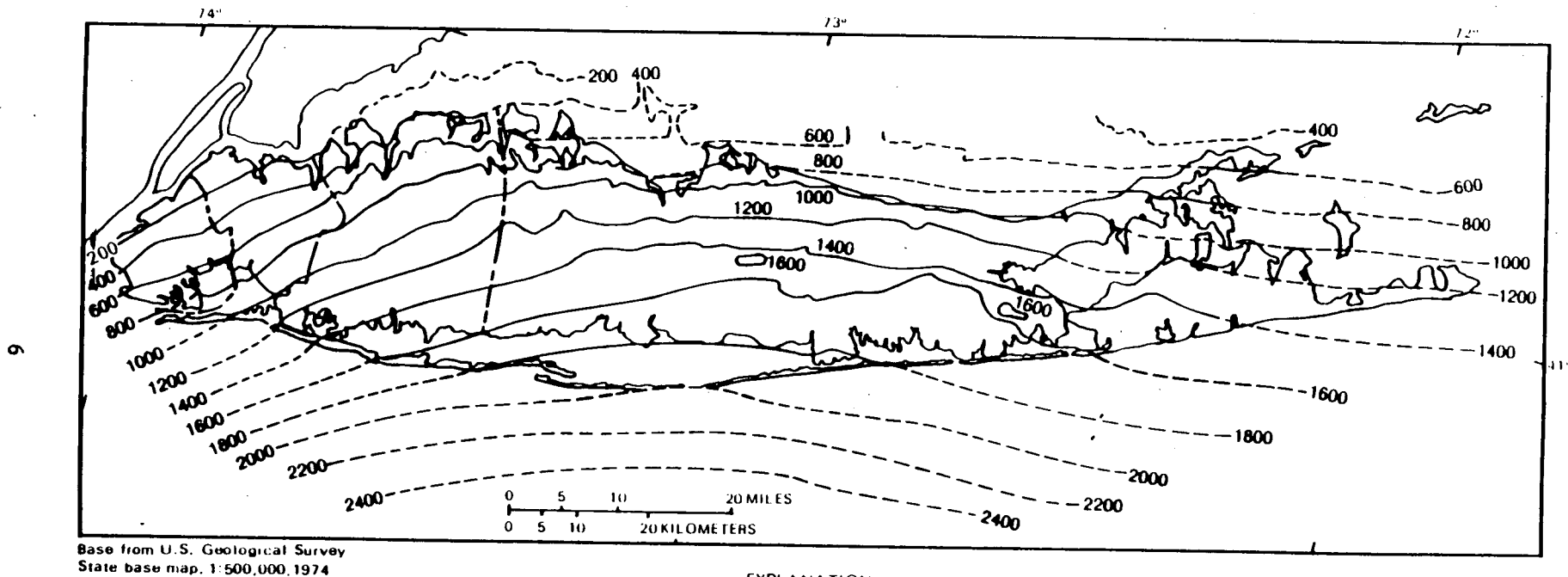
Long Island is underlain by unconsolidated deposits of clay, silt, sand, and gravel that overlie southward-dipping consolidated bedrock (fig. 2). The unconsolidated deposits are thinnest in northern Queens County (northwestern Long Island) and thicken to the south and east to a maximum thickness of 2,000 ft at the south shore. These deposits contain several distinct geologic units ranging in age from Late Cretaceous through Pleistocene, with some recent deposits near shores and along streams. These units are differentiated by age, method of deposition, and lithology in table 1.

In studies of ground-water availability and flow patterns, correlations that are based strictly on geologic factors may not adequately describe the internal structure of the hydrologic system; generally an interpretation in which the units are differentiated on the basis of water-transmitting properties is more useful. Thus, table 1 gives both the geologic units and the corresponding hydrogeologic units and shows their stratigraphic relationships. Eight major hydrogeologic units are indicated; these are, in order of deposition, consolidated bedrock, the Lloyd aquifer, the Raritan confining unit, the Magothy aquifer, the Monmouth greensand, the Jameco aquifer, the Gardiners Clay, and the upper glacial aquifer. The two hydrogeologic vertical sections shown in figure 3 depict the relative position of these units in western and eastern Long Island, respectively. The Jameco aquifer is present only in western Long Island (fig. 3A), and the Monmouth greensand is present only in eastern Long Island (fig. 3B). A map showing the extent and configuration of all units below the upper glacial aquifer is given in Smolensky and others (in press). Other local hydrogeologic units have been identified within the upper glacial deposits but are not discussed herein.

Table 1.--Hydrogeologic units of Long Island and their water-bearing properties.

System	Series	Geologic unit	Hydro-geologic unit	Approximate maximum thickness (ft)	Character of deposits	Water-bearing properties
Quaternary	Holocene	Recent deposits: Salt marsh deposits, stream alluvium, shoreline deposits, and fill.	Recent deposits	50	Sand, gravel, clay, silt, organic mud, peat, loam, and shells. Colors are gray, brown, green, black, and yellow.	Beach deposits are highly permeable; marsh deposits poorly permeable. Locally hydraulically connected to underlying aquifers.
	Pleistocene	Upper Pleistocene deposits	Upper glacial aquifer	700	Till composed of clay, sand, gravel, and boulders, forms Harbor Hill and Ronkonkoma terminal moraines. Outwash deposits consist of quartzose sand, fine to very coarse, and gravel, pebble to boulder sized. Also contains lacustrine, marine, and reworked deposits. Local units are Port Washington aquifer and confining unit, "20-foot clay," and clay at Smithtown.	Till is poorly permeable. Outwash deposits are moderately to highly permeable. Glaciolacustrine and marine clay deposits are mostly poorly permeable but locally have thin, moderately permeable layers of sand and gravel. Average horizontal hydraulic conductivity is approximately 270 ft/d; conductivity of morainal material is approximately 50 percent of outwash deposits; anisotropy is approximately 10:1.
		unconformity?				
		Gardiners Clay	Gardiners Clay	150	Clay, silt, and few layers of sand. Colors are grayish green and brown. Contains marine shells and glauconite.	Poorly permeable; constitutes a confining layer for underlying aquifer. Some sand lenses may be permeable. Average vertical hydraulic conductivity is approximately 0.001 ft/d.
		unconformity?				
		Jameco Gravel	Jameco aquifer	200	Sand, fine to very coarse, and gravel to large-pebble size; few layers of clay and silt. Gravel is composed of crystalline and sedimentary rocks. Color is mostly brown.	Moderately to highly permeable. Confined by overlying Gardiners Clay. Average horizontal hydraulic conductivity is 200 to 300 ft/d; anisotropy is approximately 10:1.
		unconformity				

Precambrian and Paleozoic	Cretaceous	Upper Cretaceous	unconformity	Monmouth Group	Monmouth Greensand	200	Interbedded marine deposits of clay, silt, and sand, dark-greenish gray, greenish-black, greenish, dark-gray, and black, containing much glauconite.	Poorly permeable; primarily a confining unit for underlying Magothy aquifer. Average vertical hydraulic conductivity is approximately 0.001 ft/d.
			unconformity	Matawan Group-Magothy Formation, undifferentiated	Magothy aquifer	1,100	Sand, fine to medium, clayey in part; interbedded with lenses and layers of coarse sand and sandy and solid clay. Gravel is common in basal zone. Sand and gravel are quartzose. Lignite, pyrite, and iron oxide concretions are common. Colors are gray, white, red, brown, and yellow.	Most layers are poorly to moderately permeable; some are highly permeable locally. Water is unconfined in uppermost parts, elsewhere is confined. Constitutes principal aquifer for public supply. Average horizontal hydraulic conductivity is 50 ft/d; anisotropy is approximately 100:1.
			unconformity	Raritan Formation	Unnamed clay member	200	Clay, solid and silty; few lenses and layers of sand. Lignite and pyrite are common. Colors are gray, red, and white, commonly variegated.	Poorly to very poorly permeable; constitutes confining layer for underlying Lloyd aquifer. Average vertical hydraulic conductivity is approximately 0.001 ft/d.
					Lloyd Sand Member	500	Sand, fine to coarse, and gravel, commonly with clayey matrix; some lenses and layers of solid and silty clay; locally contains thin lignite layers. Sand and most of gravel are quartzose. Colors are yellow, gray, and white; clay is red locally.	Poorly to moderately permeable. Water is confined by overlying Raritan clay. Average horizontal hydraulic conductivity is 40 ft/d; anisotropy is approximately 10:1.
			unconformity	Bedrock	Bedrock	---	Crystalline metamorphic and igneous rocks; muscovite-biotite schist, gneiss, and granite. A soft, clayey zone of weathered bedrock locally is more than 70 ft thick.	Poorly permeable to virtually impermeable; constitutes lower boundary of ground-water reservoir. Some hard fresh water is contained in joints and fractures but is impractical to develop at most places.



EXPLANATION

1800 — — — LINE OF EQUAL THICKNESS OF UNCONSOLIDATED DEPOSITS--
Dashed where approximately located. Contour interval 200 feet

Figure 2.--Thickness of unconsolidated deposits on Long Island.

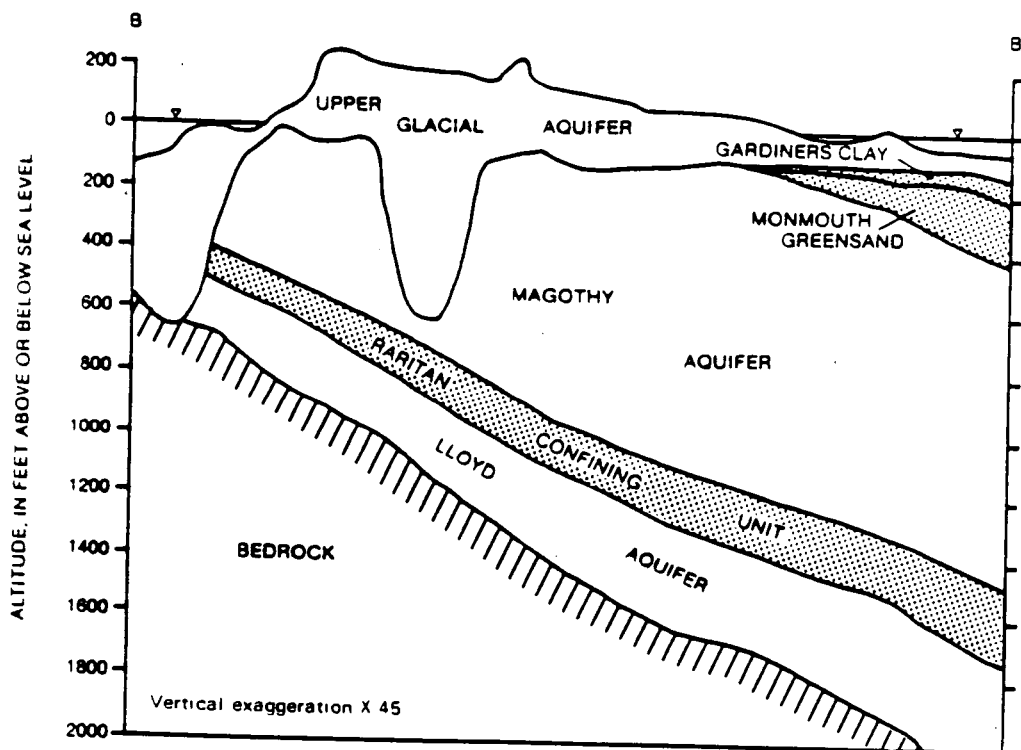
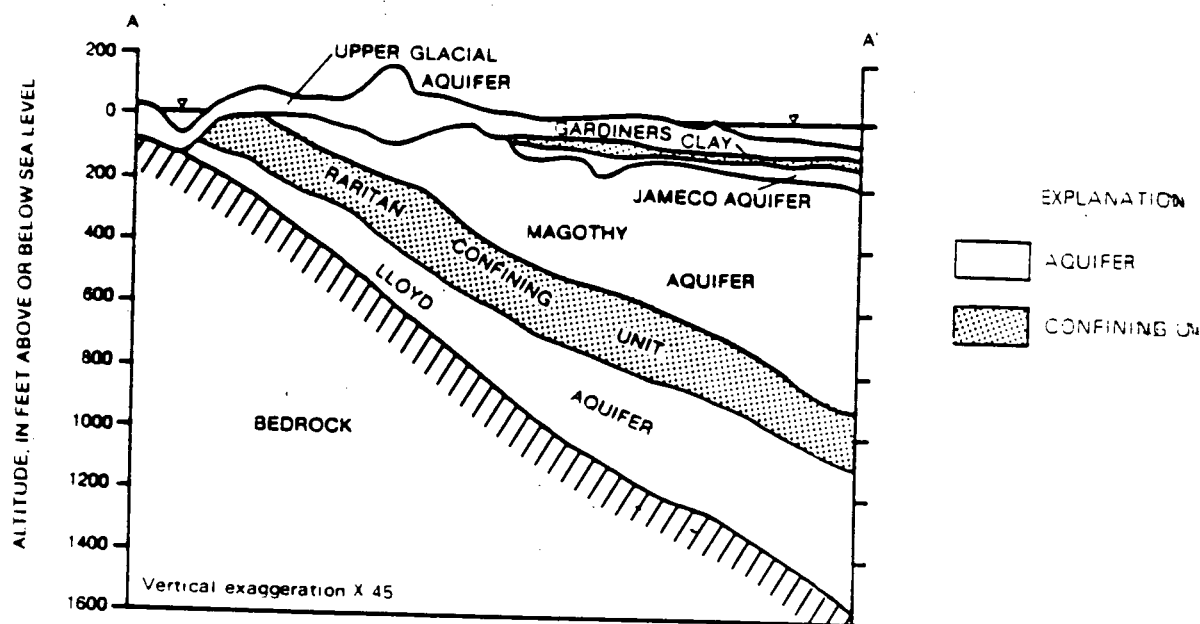


Figure 3.--Generalized vertical sections showing major hydrogeologic units:
 A. On western Long Island. B. On eastern Long Island.
 (Locations are shown in fig. 1.)

CRITERIA FOR HYDROGEOLOGIC INTERPRETATION OF WELL DATA

Hydrogeologic well data included geophysical logs and drillers' and geologists' descriptions of cores and other drilling samples. Lithologic, mineralogic, and paleontologic evidence from these sources was used in conjunction with a conceptual sedimentation model of the succession of physical environments through Long Island's geologic past to define the altitude of the upper surface of each major hydrogeologic unit penetrated by a well. Offshore seismic-reflection data (Grim and others, 1970, and Deborah Hutchinson, U.S. Geological Survey, written commun., 1984) were also considered. The surface altitudes of a unit at all wells were correlated to form a surface consistent with Long Island's geologic history.

ELEMENTS OF DATA BASE

Hydrogeologic well data from 3,146 wells throughout Long Island are given in the data base at the end of this report. These include 1,559 wells in Suffolk County, 830 wells in Nassau County, 462 wells in Queens County, 264 wells in Kings County, and 30 wells in the adjacent parts of New York City. The locations of wells in Kings, Queens, and Nassau Counties and adjacent areas are shown on plate 1; those in western Suffolk County on plate 2; and those in eastern Suffolk County on plate 3. All elements of the data base are explained in the following sections.

Well Identification

The State of New York requires that Long Island wells that pump more than 45 gal/min have a permit from the New York State Department of Environmental Conservation (NYSDEC). In the permit process, the well owner files an installation report with basic well data with NYSDEC, who assigns a well number. Other wells that are installed as geologic test holes or for collection of other forms of hydrologic data are reported voluntarily and filed.

The prefix letter of the well indicates the county in which the well is located, as follows: K, Kings; Q, Queens; R, Richmond (Staten Island); B, Bronx; M, New York (Manhattan); N, Nassau; and S, Suffolk. Wells are assigned numbers chronologically as they are reported.

Well Location

Each well has been plotted on U.S. Geological Survey 24-minute topographic maps, and the latitude and longitude estimated to the nearest second. A 5-second latitude-longitude grid is included on plates 1 through 3 to facilitate well location.

Well Altitudes

The altitude of land surface and of the bottom of the borehole is given in feet above or below (-) sea level. Many boreholes are significantly deeper than the completed well, and commonly the hydrogeologic information from the backfilled part of the hole is of value in that it indicates the presence or absence of a hydrogeologic unit at that depth.

Hydrogeologic Unit Penetrated and Altitude of Upper Surface

The altitude of the upper surface of any of the seven major hydrogeologic units penetrated by a well is given in feet above or below sea level. Altitudes facilitate correlation of these horizons among adjacent wells. In areas where the hydrogeologic unit is believed present but its exact surface altitude is difficult to identify, the term PRES (present) is entered. Where the unit is believed present but no drillers' log or other geologic information is available, the term NOREC (no record) is entered.

Adjacent Wells

Many wells are drilled in or near the same location; they may be clustered for site-specific projects or may be one of several grouped together in a well field. Only the most recent well at a location is labeled on plates 1 through 3; adjacent wells are included in the data base.

SELECTIVE DATA RETRIEVAL

Selective retrieval of information on individual hydrogeologic units is useful in defining the configuration and extent of a unit and its relationship to contiguous units. This section briefly describes a simple algorithm (and FORTRAN program, table 2) that retrieves selected information from the data base and prepares it in a form compatible with software available for plotting maps of Long Island (G. W. Hawkins, U.S. Geological Survey, written commun., 1984).

Program Documentation

A user can select pertinent information from nine fields in the data base. These nine fields along with a blank field are:

<u>Field</u>	<u>Information</u>
1	Well number
2	Altitude of hole bottom
3	Altitude of upper surface of Gardiners Clay
4	Altitude of upper surface of Jameco aquifer
5	Altitude of upper surface of Monmouth Greensand
6	Altitude of upper surface of Magothy aquifer
7	Altitude of upper surface of Raritan confining unit
8	Altitude of upper surface of Lloyd aquifer
9	Altitude of upper surface of consolidated bedrock
10	Blank field

The algorithm retrieves information from the selected field(s) and creates a file of labels. The file includes the latitude and longitude of the well for location, the symbol used for plotting the well on a map of Long Island, and the desired label to be plotted at each symbol (labels are selected from the above fields).

Table 2.--FORTRAN computer program for

```

CHARACTER*6 NF(10),NA,NB,NC,NL
CHARACTER*1 NS,TEXTIN,NN
PRINT*, '*****'
PRINT*, '*** PROGRAM - HYDROGEOLOGY RETRIEVE(HGR.F77) ***'
PRINT*, '*** GENERATES A LABEL FILE (FOR MLIPLLOT) ***'
PRINT*, '*** FROM THE HYDROGEOLOGY DATA BASE. ***'
PRINT*, '*****'
PRINT*, '***ENTER NAME OF HYDROGEOLOGY FILE'
CALL IFILE(15)
PRINT*, '***ENTER NAME OF LABEL CARDS FILE'
CALL OFILE(4,16)

C
PRINT*, '*****'
NCHOP=INTIN(' ***ENTER 0 FOR ISLAND-WIDE RETRIEVAL, 1 FOR LOCAL'
IF(NCHOP.EQ.0) GO TO 20
LNLAT=INTIN(' ***ENTER LAT OF NORTHERN EXTENT OF LOCAL AREA***')
LSLAT=INTIN(' ***ENTER LAT OF SOUTHERN EXTENT OF LOCAL AREA***')
LELONG=INTIN(' ***ENTER LONG OF EASTERN EXTENT OF LOCAL AREA***')
LWLONG=INTIN(' ***ENTER LONG OF WESTERN EXTENT OF LOCAL AREA***')
20 CONTINUE

C
PRINT*, '*****'
PRINT*, '*** THE DATA BASE HAS THE FOLLOWING ***'
PRINT*, '*** INFORMATION IN THE NOTED NUMBERED FIELDS. ***'
PRINT*, '*****'
PRINT*, '*** - 1- WELL NUMBERS ***'
PRINT*, '*** - 2- ALTITUDE OF HOLE BOTTOM ***'
PRINT*, '*** - 3- ALT. OF GARDINERS CLAY ***'
PRINT*, '*** - 4- ALT. OF JAMECO GRAVEL ***'
PRINT*, '*** - 5- ALT. OF MONMOUTH GREENSAND ***'
PRINT*, '*** - 6- ALT. OF MAGOTHY AQUIFER ***'
PRINT*, '*** - 7- ALT. OF RARITAN CONFINING UNIT ***'
PRINT*, '*** - 8- ALT. OF LLOYD AQUIFER ***'
PRINT*, '*** - 9- ALT. OF BEDROCK ***'
PRINT*, '*** -10- BLANK FIELD(NO LABEL IN OPTIONS) ***'
PRINT*, '*****'
NN=TEXTIN('ENTER C TO CONTINUE')
PRINT*, '*****'
PRINT*, '*** THREE OPTIONS ARE AVAILABLE ***'
PRINT*, '*** ----- ***'
PRINT*, '*** 1- LABEL WITH FIELD A IF: ***'
PRINT*, '*** FIELD B IS NOT BLANK. ***'
PRINT*, '*** 2- LABEL WITH FIELD A IF: ***'
PRINT*, '*** FIELD B IS BLANK ***'
PRINT*, '*** 3- LABEL WITH FIELD A IF: ***'
PRINT*, '*** FIELD B IS BLANK, AND ***'
PRINT*, '*** FIELD C IS NOT BLANK. ***'
NN=TEXTIN('ENTER C TO CONTINUE')
PRINT*, '*****'
PRINT*, '*** '
NOP=INTIN(' *** - ENTER OPTION( 1,2 OR 3)***')

```

retrieval of hydrogeologic data.

```
PRINT*, '*** '
NS=TEXTIN(' ***ENTER SYMBOL FOR WELL POINT ***')
PRINT*, '*** '
C
NF(10)= '
IA=INTIN(' ***ENTER FIELD FOR A ***')
IB=INTIN(' ***ENTER FIELD FOR B ***')
IF(NOP.NE.3) GO TO 15
IC=INTIN(' ***ENTER FIELD FOR C ***')
C
15 PRINT*, '*****'
PRINT*, '*** YOU HAVE THE OPTION TO HAVE THE INFO IN ***'
PRINT*, '*** ONE OF THE FIELDS ADDED TO THE END OF ***'
PRINT*, '*** THE LABEL CARDS FOR REFERENCE. ***'
IL=INTIN(' *** ENTER FIELD # FOR EXTRA LABEL***')
C
C READ DATA FOR A WELL
C
10 READ(15,8,END=99)NF(1),LAT,LONG,(NF(I),I=2,9)
8 FORMAT(A6,3X,I6,1X,I6,7X,A6,3X,A6,1X,A6,
/ 1X,A6,1X,A6,1X,A6,1X,A6,1X,A6)
C
IF(NCHOP.EQ.0)GO TO 25
IF(LAT.GT.LNLAT.OR.LAT.LT.LSLAT) GO TO 10
IF(LONG.GT.LWLONG.OR.LONG.LT.LELONG) GO TO 10
25 CONTINUE
C
C DEFINE FIELDS A,B,C AND L
C
NA=NF(IA)
NB=NF(IB)
IF(NOP.NE.3) GO TO 140
NC=NF(IC)
C
140 CONTINUE
NL=NF(IL)
C
GO TO (50,60,70),NOP
50 IF(NB.NE.' ') GO TO 5
GO TO 10
60 IF(NB.EQ.' ') GO TO 5
GO TO 10
70 IF(NB.EQ.' ' .AND. NC.NE.' ') GO TO 5
GO TO 10
C
5 WRITE(16,9)NS,LAT,LONG,NA,NL
9 FORMAT('L 0 ',A1,20X,I6,1X,I6,4X,A6,30X,A6)
GO TO 10
99 CONTINUE
STOP
END
```

One of three options can be selected:

- (1) Label with field A if field B is not blank,
- (2) Label with field A if field B is blank,
- (3) Label with field A if field B is blank, and field C is not blank,

where A, B, and C are defined to be one of the ten fields listed on page 9. Data can be retrieved on an islandwide scale or for a local area by defining limiting latitudes and longitudes.

Sample Retrievals

The options provided by this program enable the user to retrieve selected data and plot maps that are useful in defining hydrogeologic geometry, either on an islandwide or a local scale. Several examples of data retrievals are outlined below; an application to construct a hydrogeologic surface map is presented also.

Example 1.--Select option 1; designate field A equal to 1 (well number) and field B equal to 6 (altitude of the upper surface of the Magothy aquifer).

A file is prepared for use in plotting a map that shows the locations and well numbers of all wells that penetrate the Magothy aquifer. (If field A were designated equal to 6, the map would show the surface altitude of the Magothy aquifer at each well).

Example 2.--Select option 3; designate field A equal to 10, field B equal to 3, and field C equal to 6.

A file is prepared for use in plotting a map that identifies by a symbol each well that does not penetrate the Gardiners Clay but contacts the underlying Magothy aquifer. This indicates that the Gardiners Clay is absent at this site and provides a guide to defining the extent of that unit.

Example 3.--Select option 3; designate field A equal to 2, field B equal to 7, and field C equal to 6.

A file is prepared for use in plotting a map that shows the altitude of the bottom of all wells that penetrate the Magothy aquifer but not the underlying Raritan confining unit. The surface of the confining unit must be below this altitude.

An example of a hydrogeologic-unit map constructed with this data-retrieval system is shown in figure 4 (p. 14). This map shows the upper-surface configuration of the Raritan confining unit. All data on the map were retrieved from the data base through the discussed algorithm and are as follows:

- Upper surface altitude of the Raritan confining unit in wells where it is overlain by the Magothy aquifer, in feet. These values indicate the altitude of the unconformity between these units, a relatively flat surface.
- Upper surface altitude of the Raritan confining unit in wells where the Magothy aquifer is absent. These values indicate the altitude of the Cretaceous surface where it has experienced severe post-Cretaceous erosion, especially during the Pleistocene.
- Bottom altitude of wells that penetrate the Magothy aquifer but not the Raritan confining unit. These values indicate the highest possible surface altitude of the Raritan confining unit and are used to guide contours where wells are not deep enough to penetrate the unit.
- Locations of wells that do not penetrate the Raritan confining unit but do contact older and stratigraphically deeper hydrogeologic units (the Lloyd aquifer or unconsolidated bedrock), indicating that the Raritan confining unit is absent at this location.


When combined, these data are a valuable aid to defining the surface configuration of a hydrogeologic unit; they also facilitate definition of the extent of a hydrogeologic unit and differentiation of the parts of the surface that were shaped by differing geologic events or environments. Use of this data-retrieval method is most advantageous in areas where typically layered strata have been affected by severe erosion.

SUMMARY

The hydrogeologic data base and method of selective retrieval presented in this report offer a method to obtain hydrogeologic data for any local area on Long Island and provide the data in a format suitable for construction of hydrogeologic maps. The data represent the upper surface altitudes of the hydrogeologic units penetrated in 3,146 wells on Long Island and surrounding parts of New York City. The surface altitude of each hydrogeologic unit at a well was inferred through inspection of lithologic, mineralogic, paleontologic, and geophysical data collected from the well and by correlation of surface altitudes in nearby wells. The resulting series of correlated surface altitudes were used to define the surface configuration of the hydrogeologic units on a set of maps by Smolensky and others (in press).

As additional hydrogeologic data become available, reevaluation of correlations with nearby wells and concurrent adjustment of the data would be advisable so that the data base will accurately represent the hydrogeologic structure of Long Island's ground-water reservoir.

EXPLANATION TO FIGURE 4

- *-60 UPPER SURFACE ALTITUDE OF RARITAN CONFINING UNIT--
where Magothy aquifer is overlying, in feet below NGVD of 1929.
- 38 UPPER SURFACE ALTITUDE OF RARITAN CONFINING UNIT--where Magothy
aquifer was eroded away, in feet below NGVD of 1929.
- x-114 ALTITUDE OF BOTTOM OF WELL THAT CONTACTS MAGOTHY AQUIFER BUT
NOT RARITAN CONFINING UNIT--in feet below NGVD of 1929.
- WELL THAT DOES NOT CONTACT RARITAN CONFINING UNIT BUT DOES CONTACT
AN UNDERLYING UNIT.
- *PRES UNIT IS BELIEVED PRESENT BUT ITS SURFACE ALTITUDE IS UNDEFINED AT
THIS WELL.
- NOREC NO BOREHOLE INFORMATION IS AVAILABLE IN THE INTERVAL WHERE THIS
UNIT IS BELIEVED PRESENT.
- EXTENT OF RARITAN CONFINING UNIT.
- 50— LINE OF EQUAL UPPER SURFACE ALTITUDE--contour interval 50 and
100 feet. Datum is NGVD of 1929.
-  AREA WHERE RARITAN CONFINING UNIT IS UNCONFORMABLY overlain BY
MAGOTHY AQUIFER.

4044. 7351 DEGREES AND MINUTES OF LATITUDE AND LONGITUDE, RESPECTIVELY.

REFERENCES CITED

- Buxton, H. T., Soren, Julian, Posner, Alex, and Shernoff, P. K., 1981, Reconnaissance of the ground-water resources of Kings and Queens Counties, New York: U.S. Geological Survey Open-File Report 81-1186, 59 p.
- Grim, M. S., Drake, C. L., and Heirtzler, J. R., 1970, Sub-bottom study of Long Island Sound: Geological Society of America Bulletin 81, p. 649-699.
- Jensen, H. M., and Soren, Julian, 1971, Hydrogeologic data from selected wells and test holes in Suffolk County, Long Island, New York: Long Island Water Resources Bulletin 3, 35 p.
- Kilburn, Chabot, 1980, Hydrogeology of the Town of North Hempstead, Nassau County, Long Island, New York: Long Island Water Resources Bulletin 12, 87 p.
- Kilburn, Chabot, and Krulik, R. K., Hydrogeology and ground-water quality of the northern part of the Town of Oyster Bay, Nassau County, New York, in 1980: U.S. Geological Survey Water-Resources Investigations Report 85-405 (in press).
- Krulik, R. K., 1981, Hydrogeologic data from selected wells and test holes in Suffolk County, Long Island, New York, 1972-80: U.S. Geological Survey Open-File Report 81-500, 27 p.

Smolensky, D. A., Buxton, H. T., and Shernoff, P. K., Hydrogeologic framework of Long Island, New York: U.S. Geological Survey Hydrologic Investigations Atlas HA-709, Scale 1:125,000 (in press).

Veatch, A. C., Slichter, C. S., Bowman, Isaiah, Crosby, W. O., and Horton, R. E., 1906, Underground water resources of Long Island, New York: U.S. Geological Survey Professional Paper 44, 394 p.

REFERENCE NO. 23

CONTROL NO:

DATE:

6/24/87

TIME:

1340 HRS

DISTRIBUTION:

COMMERCIAL ENVELOPE MFG. CO. INC. (COM)

TDD # 02-8704-03

BETWEEN:

JAMES DESALIZ

OF: TOWN OF BABYLON

HIGHWAY DEPT

PHONE:

(516) 422-1211

AND:

E. LEONARD

(NUS)

DISCUSSION:

RE: STORM DRAIN DESTINATION FROM COM

INDUSTRIAL PROPERTY DRAINAGE CANNOT
ENTER TOWN STORM SEWER SYSTEM.OWNERS MUST CONTAIN THEIR OWN
RUN-OFF. WATER PROBABLY ENTERS A
LEACHING POOL ON SITE. OWNER SHOULD
KNOW DESTINATION OF STORM DRAIN.

ACTION ITEMS:

REFERENCE NO. 24

NUS CORPORATION AND SUBSIDIARIES

TELECON NOTE

CONTROL NO.

DATE

TIME

8-13-90

1445

DISTRIBUTION

Commercial Envelope Mfg. Co
02-8704-03

BETWEEN

OF: ERIE County

PHONE:

Colby Tucker

D.E.C.

(518) 457-3495

AND:

J. Leahy

(NUS)

DISCUSSION:

I asked Mr. Tucker for the classification of
Sampawans Creek he indicated that the
Creek is Classified as a C Classification.

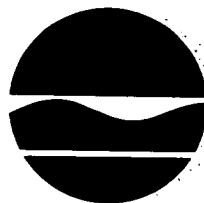
J. Leahy

ACTION ITEMS:

REFERENCE NO. 25

WATER QUALITY REGULATIONS
SURFACE WATER AND GROUNDWATER
CLASSIFICATIONS AND STANDARDS

New York State
Codes, Rules and Regulations
Title 6, Chapter X
Parts 700-705



New York State Department of Environmental Conservation

CLASS "B"

Best usage of waters. Primary contact recreation and any other uses except as a source of water supply for drinking, culinary or food processing purposes.

Quality Standards for Class "B" Waters

<i>Items</i>	<i>Specifications</i>
1. Coliform.	The monthly median coliform value for 100 ml of sample shall not exceed 2,400 from a minimum of five examinations, and provided that not more than 20 percent of the samples shall exceed a coliform value of 5,000 for 100 ml of sample and the monthly geometric mean fecal coliform value for 100 ml of sample shall not exceed 200 from a minimum of five examinations. This standard shall be met during all periods when disinfection is practiced.
2. pH	Shall be between 6.5 and 8.5.
3. Total dissolved solids.	None at concentrations which will be detrimental to the growth and propagation of aquatic life. Waters having present levels less than 500 milligrams per liter shall be kept below this limit.
4. Dissolved oxygen.	For cold waters suitable for trout spawning, the DO concentration shall not be less than 7.0 mg/l from other than natural conditions. For trout waters, the minimum daily average shall not be less than 6.0 mg/l. At no time shall the DO concentration be less than 5.0 mg/l. For non-trout waters, the minimum daily average shall not be less than 5.0 mg/l. At no time shall the DO concentration be less than 4.0 mg/l.

CLASS "C"

Best usage of waters. The waters are suitable for fishing and fish propagation. The water quality shall be suitable for primary and secondary contact recreation even though other factors may limit the use for that purpose.

Quality Standards for Class "C" Waters

<i>Items</i>	<i>Specifications</i>
1. Coliform.	The monthly median coliform value for 100 ml of sample shall not exceed 2,400 from a minimum of five examinations, and provided that not more than 20 percent of the samples shall exceed a coliform value of 5,000 for 100 ml of sample and the monthly geometric mean fecal coliform value for 100 ml of sample shall not exceed 200 from a minimum of five examinations. This standard shall be met during all periods when disinfection is practiced.
2. pH	Shall be between 6.5 and 8.5.

3. Total dissolved solids. None at concentrations which will be detrimental to the growth and propagation of aquatic life. Waters having present levels less than 500 milligrams per liter shall be kept below this limit.
4. Dissolved oxygen. For cold waters suitable for trout spawning, the DO concentration shall not be less than 7.0 mg/l from other than natural conditions. For trout waters, the minimum daily average shall not be less than 6.0 mg/l. At no time shall the DO concentration be less than 5.0 mg/l. For non-trout waters, the minimum daily average shall not be less than 5.0 mg/l. At no time shall the DO concentration be less than 4.0 mg/l.

CLASS "D"

Best usage of waters. The waters are suitable for fishing. The water quality shall be suitable for primary and secondary contact recreation even though other factors may limit the use for that purpose. Due to such natural conditions as intermittency of flow, water conditions not conducive to propagation of game fishery or stream bed conditions, the waters will not support fish propagation.

Conditions related to best usage of waters. The waters must be suitable for fish survival.

Quality Standards for Class "D" Waters

<i>Items</i>	<i>Specifications</i>
1. pH	Shall be between 6.0 and 9.5.
2. Dissolved oxygen.	Shall not be less than 3 milligrams per liter at any time.
3. Coliform.	The monthly median coliform value for 100 ml of sample shall not exceed 2,400 from a minimum of five examinations and provided that not more than 20 percent of the samples shall exceed a coliform value of 5,000 for 100 ml of sample and the monthly geometric mean fecal coliform value for 100 ml of sample shall not exceed 200 from a minimum of five examinations. This standard shall be met during all periods when disinfection is practiced.

Historical Note

Sec. added by renum. and amd. 701.4, filed July 3, 1985; amd. filed Sept. 20, 1985 eff. 30 days after filing.

701.20 **Classes and standards for saline surface waters.** The following items and specifications shall be the standards applicable to all New York saline surface waters which are assigned the classification of SA, SB, SC or SD, in addition to the specific standards which are found in this section under the heading of each such classification.

REFERENCE NO. 26

NUS CORPORATION AND SUBSIDIARIES

TELECON NOTE

CONTROL NO.

DATE:

TIME:

8-15-90

900

DISTRIBUTION

Commercial Envelope
62-8704-03

BETWEEN:

Mrs. Bahr

OF Suffolk County
Water Authority

PHONE:

(516) 669-1669

AND:

J. Leahy

(NUS)

DISCUSSION:

I asked Mrs Bahr if there were any surface water intakes within 3-miles of Commercial Envelope. As far as she knew there weren't any that she was aware of.

J Leahy

ACTION ITEMS:

REFERENCE NO. 27

NATIONAL FLOOD INSURANCE PROGRAM

**FIRM
FLOOD INSURANCE RATE MAP**

**TOWN OF
BABYLON, NEW YORK
SUFFOLK COUNTY**

PANEL 25 OF 50

(SEE MAP INDEX FOR PANELS NOT PRINTED)

**COMMUNITY-PANEL NUMBER
360790 0025 B**

**EFFECTIVE DATE:
JULY 16, 1979**



Federal Emergency Management Agency

DESCRIPTION OF LOCATION

disk set in top of concrete post; 91 feet south
outh corner of the Deer Park railroad station,
e of a white post.

d disk set in a drill hole of a garage floor at 5
ck Road, on the northeast corner of Com-
o and Eddie Avenue.

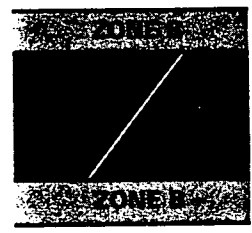
disk set in top of the south end of the east
parapet wall of bridge over Southern State
y 26 feet east of the centerline of Deer Park

CE MARKS

CORPORATE LIMITS

KEY TO MAP

- 500-Year Flood Boundary
- 100-Year Flood Boundary
- Zone Designations* With Date of Identification e.g., 12/2/74
- 100-Year Flood Boundary
- 500-Year Flood Boundary
- Base Flood Elevation Line With Elevation In Feet**
- Base Flood Elevation in Feet Where Uniform Within Zone**
- Elevation Reference Mark
- Zone D Boundary
- River Mile



513

(EL 987)

RM7X

•M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only: it does not neces-

Certain
may be protected

This map is for flood insurance purposes only. It does not necessarily show all areas subject to flooding in the community, nor all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:

JULY 26, 1974

FLOOD HAZARD BOUNDARY MAP REVISIONS:

JANUARY 30, 1976

FLOOD INSURANCE RATE MAP EFFECTIVE:

JULY 16, 1979

FLOOD INSURANCE RATE MAP REVISIONS:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.



APPROXIMATE SCALE

800 0 800 FEET

NATIONAL FLOOD INSURANCE PROGRAM

SITE INSPECTION REVIEW FORM

SITE NAME: Commercial Envelope Manufacturing Co
CITY, STATE: Deer Park, NY
ADDRESSES: _____
CERCLIS ID #: NYD981184138
FISCAL YEAR & QUARTER FOR SCRP: N/A
CONTRACTOR RECOMMENDATION: LSI in 1990.
EPA RECOMMENDATION: LOW
PA METHOD SCORE: NONE done.
WAS SAMPLING CONDUCTED BY CONTRACTOR? yes. 36W, 2 Soil.

COMMENTS:

active site w/ 4 source areas: leaching pools, unlined
USTs; trash compactor area; and 45,835 gallon ink
waste spill. Sources involved approximately 23,000
gallons of liquid wastes. 1987 sampling showed both soil
& GW to be contaminated w/ inorganics & VOCs ~~attributable~~
attributable to site. GW is sole source of DW for ~110,000
people in the area. The ink spill, soil, & leaching ponds &
USTs were closed/cleaned up under a consent order, but
GW contamination remains a problem. GW flow
assumed to be south, nearest well .75 mi up grade
of site. Recommend Low as most of the sources under
& GW ~~water~~ targets are only potentially threatened.

REVIEWER: _____

DATE: _____

REASSESSMENT BY: Mary LatkaRECOMMENDATION: Low - need SIP, test DW wells / PA scoreDATE: Jan 6, 1993

ZONE C

LONG ISLAND AVENUE
LONG ISLAND RAILROAD

+
off road
etc.
location

4

SUBURBAN

AVENUE

PAT

CARLLS

REFERENCE NO. 28

LEGEND



Prime farmland

Total acres 69,180



Unique farmland, other than prime

Total acres 51,013



Additional farmland of
statewide importance

Total acres 54,071

Additional farmland of
local importance

Total acres none reported



Other land



Water areas

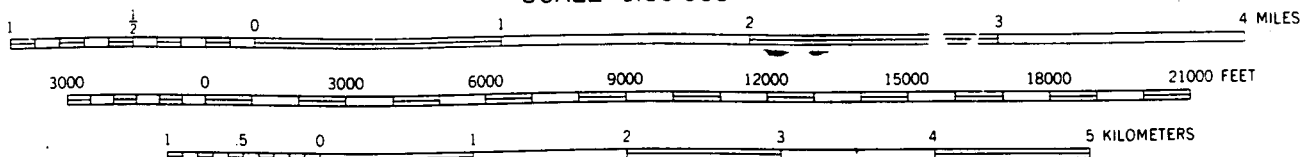


Approximate urban and
built-up areas

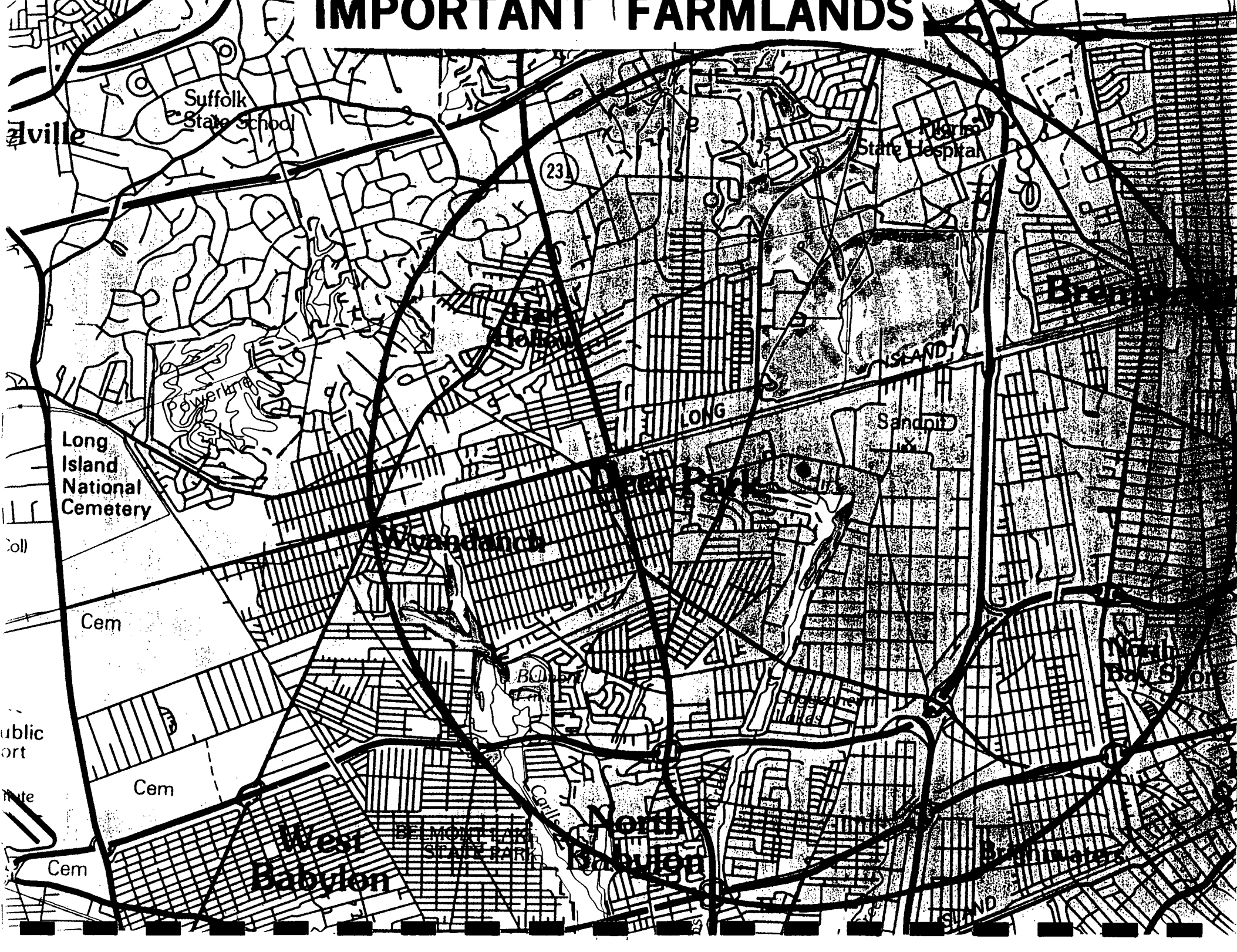
Areas represented are
greater than 10 acres in size

*Because of the limitations of map scale, some
delineations may contain inclusions of soils
that do not meet the definition of that category.*

SCALE 1:50 000



IMPORTANT FARMLANDS



REFERENCE NO. 29

Commercial Envelope

DATE	W Division	
1/5/81	Doug OBing	investigates spill at Commercial. sample of puddle 6.9 lead + sample for pipe sample (0.5 ms/l is limit allowed)
1/27/81	Perrella	letter requesting spill clean up by scavenger
1/28/81	sample analysis	Newman labs. partial sample analysis of wastewater
3/2/81	"	" " lead analysis 1 ms/l
4/13/81	" Formal" Hearing	C.O. was not signed until 6/30/81 + \$500 Paul request to Chromadynas labs for more detailed analysis
4/11/81	Santoro	Formal hearing scheduled for 6/16/81 but cancelled because C.O. was signed
6/1/81	Paul Creditor	letter to Pin geology for delay in "analysis Plan" for dirt pile + requesting list of tank tests
5/14	Creditor	letter to Santoro requesting info on art 12 storage + ^{notification that} C.O. will be signed
5/14	Newman	letter to Pin detailing the methods to be sampled
6/2/81	Creditor	letter to Pin requesting acknowledgement in writing of "Plan submitted" +
6/3	Creditor	letter to Santoro again requesting art 12 guidelines
?	"	memo for Creditor thanking Santoro "for the paper forwarded"
6/12	Pin	letter to Newman approving + modifying plan to sample
6/17	Pin	letter to Creditor enclosing list of tank testing Companies
6/16/81		Formal Hearing scheduled but cancelled
6/30		Council order signed by Commercial
7/1/81	Creditor	letter to Gilbert - returning signed C.O. with request to amend date of Para #1, 5 + 6
7/27	Creditor	letter to Gilbert requesting return of C.O. signed by Commissioner
7/30	Gilbert	letter to Commercial returning copy of signed C.O.
		Formal Hearing ^{was} held on 4/1/82 Paul Creditor appeared for case

RECEIVED

'81 JUL 27 PM 12:01

OFFICE OF THE
COMMISSIONER OF HEALTH

LONG ISLAND TRUST COMPANY
COMAC & NICHOLS ROAD
DEER PARK, N.Y. 11729

COMMERCIAL ENVELOPE MFG. CO. INC.
900 GRAND BOULEVARD
DEER PARK, N.Y. 11729

CHECK NO.

50-1063
214

022602

DATE

6/24/81

PAY THIS AMOUNT

***** 500. DOLLARS 00 CENTS

AMOUNT OF CHECK

\$500.00

Department of Health Services

AUTHORIZED SIGNATURE

⑈022602⑈ ⑈021410637⑈ ⑈18⑈31108⑈4⑈

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES

CASH RECEIPT

RECEIVED *Five hundred dollars*
FOR
NAME

AMOUNT [\$ 500 -]

DATE *7-15-81* 19

REFERENCE NO.

☐ = PAYMENT FOR PREVIOUS SERVICE

FROM

Commercial Envelope Mfg. Co.
900 Grand Blvd.
Deer Park N.Y. 11729
CITY STATE ZIP CODE

CENTER PROVIDING SERVICE

☐ HEALTH CENTER ☐ HHS ☐ MH CENTER
☒ ENVIRONMENTAL ☐ DA ☐ TB
☐ PHCP ☐ FP ☐ OPR

FORM OF PAYMENT

☐ CERTIFIED CHECK ☒ CHECK ☐ CASH

COPY 1 PAYER

COPY 2 ADMINISTRATION

COPY 3 PAYEE

OTHER

REC'D.

X
BY

Ann Kelly